THE YOUNG MINERALOGIST





THE JAWS OF DEATH

EDWIN J. HOUSTON

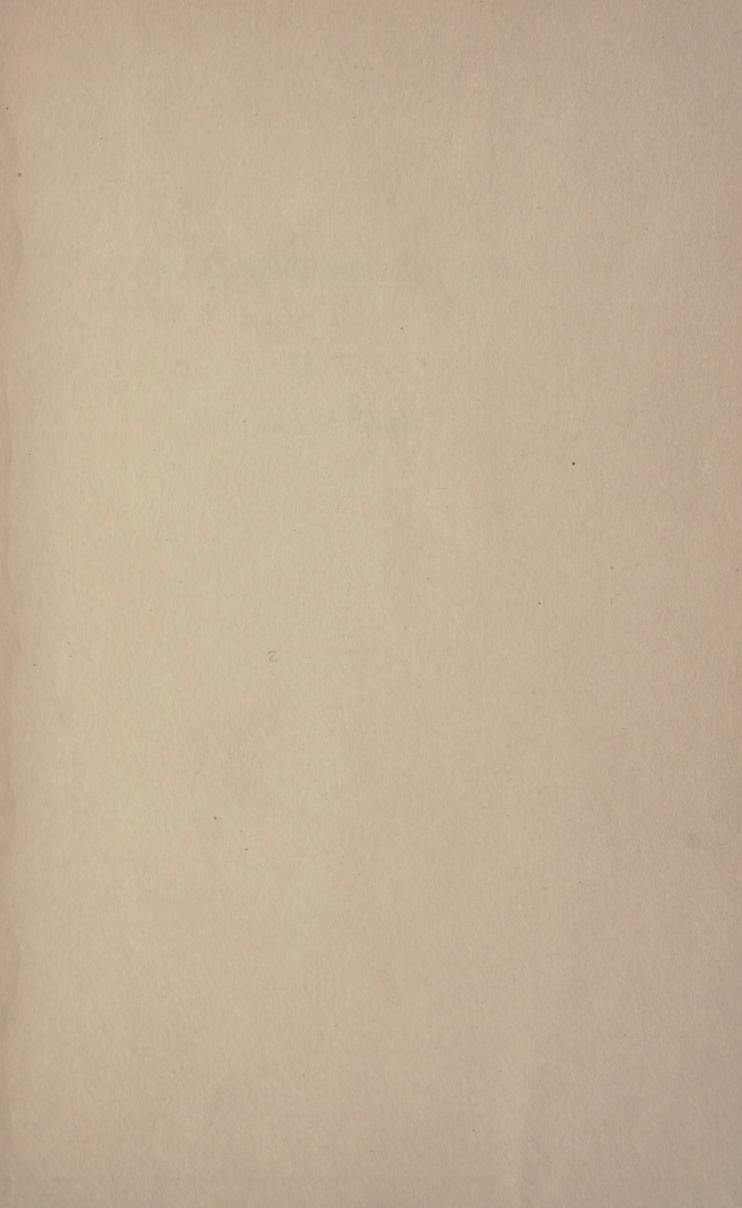


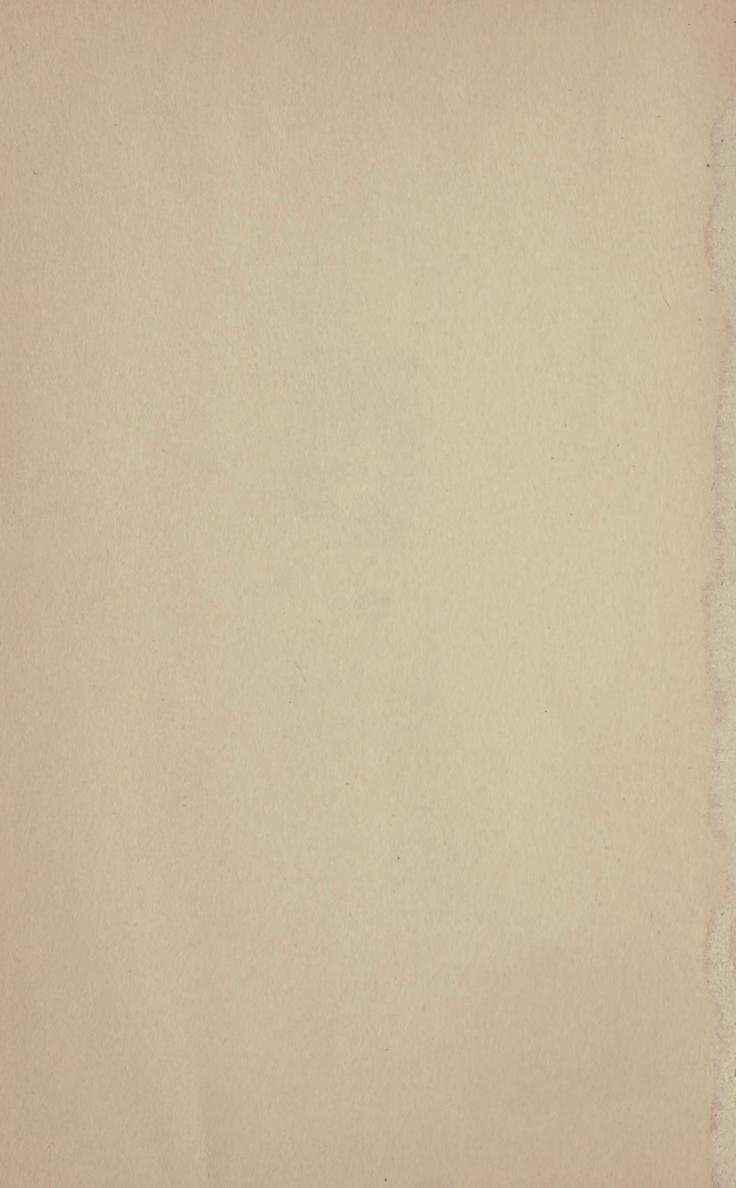
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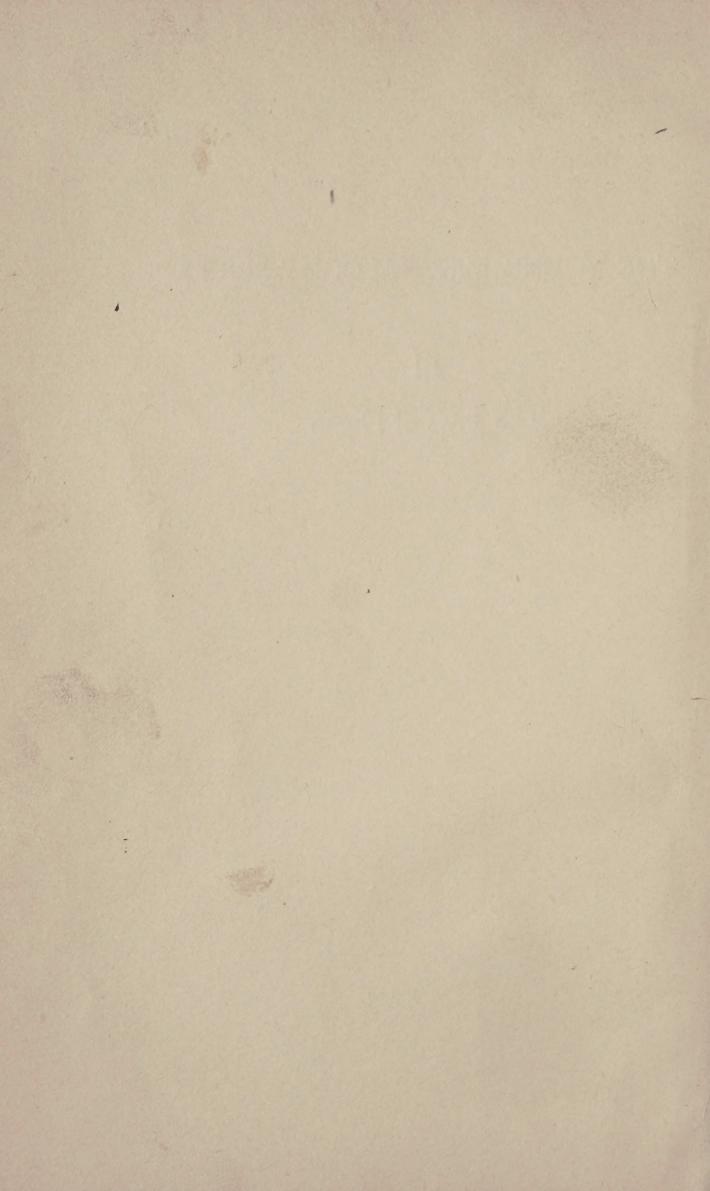
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THE YOUNG MINERALOGIST SERIES

III
The Jaws of Death



THE JAWS OF DEATH

Or, IN AND AROUND THE CAÑONS OF THE COLORADO

By
Prof. Edwin J. Houston, A. M., Ph. D. (Princeton)

Author of

"Five Months on a Derelict," "Wrecked on a Coral Island"
"In Captivity in the Pacific," "At School in the Cannibal Islands"
"The North Pole Series," "The Young Prospector"
"The Wonder Books of Science," etc., etc.



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CHARACTERS

ROBERT HAROLD GORDON, SR. ROBERT HAROLD GORDON, JR.

ROBERT HAROLD GORDON, 3RD., or "Rob."

JOHN ALEXANDER CHRISTIAN, mining engineer and friend of Robert Harold Gordon, Sr.

Prof. Joseph Jackson Engleman, geologist and mining engineer.

RALPH EARL CLINTON, or "Happy"; always lucky.

CARL EMIL Schloss, fond of chemistry.

Rob's chums.

NORMAN EDWIN TAGGART, from Bos-

ton, nephew of Engleman.

Fred Lossing, Francksen's apprentice.

Blavinski, a Russian nobleman.

August Wilfred Francksen, a Philadelphia lapidary.

JOSEPH SMITH, a Mormon, leader of th

Danites.

Ephraim Smith, brother of Joseph and miners.

Smith.

CHARACTERS

B. B. BLANK, a Philadelphia detective.

IVAN PETROMELINSKI, a Russian detective.

STANISLAUS MET-

CHINISKOFF.
SIGISMUND MASHINSKY.

Russian thieves and murderers.

Colorado Bill, the principal cowboy guide; great friend of Happy's.

Mr. Brown, of Utah, owner of the boats.

BIG FRANK, a cowboy guide.

PETE, the cowboy guide of Robert Harold Gordon, Jr.

AWAKE-IN-THE-NIGHT, Indian guide for Christian and Engleman.

LIGHT-OF-THE-SUN, head shaman of the Pueblo village.

PREFACE

"The Jaws of Death," although a distinct and independent book, contains a description of the adventures of practically the parties who have already been described in the first and second volumes of "The Young Mineralogist Series"; i. e., "A Chip of the Old Block," and "The Land of Drought."

"The Jaws of Death" contains a full description of a number of exciting adventures, during which Rob's grandfather and father are liberated from the Mormons. It takes its name from the fact that during some of these adventures a few of the party, under the guidance of Awake-in-the-Night, took the risk of passing through the cañons of the Colorado River, south of the union of the Green and the Grand Rivers.

The name, Jaws of Death, was given to this region by Awake-in-the-Night, in order to express the great danger that attended a journey through a depressed river channel, that not only frequently changes its direction, but was at different points rendered almost unnavigable by dangerous rapids and waterfalls.

Valuable information is given of some of the more striking mineralogical and geological features of the adjacent country, especially of the wonders that are to be seen at the bottom of the cañons. At the same time, however, care has been taken not to permit the wish to impart valuable instruction to lessen in any degree the interest of the story.

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CHAPTER I

ROBERT HAROLD GORDON, JUNIOR

"ARE you medicine man?"

"Why do you ask?"

"White man down there heap sick. Want medicine man quick!"

It was an Apache Indian who asked the question and gave the information. The one to whom he spoke was a white man, whose only other companion was a cowboy.

When the Indian, in reply to the white man's question, said:

"White man down there heap sick," etc., he pointed to a cañon at the bottom of which, more than one thousand feet below the surface, could be seen the slender thread of a stream. The white man was Robert Harold Gordon, Jr., father of our friend Robert, whose adventures we have followed in the two volumes of "The Young Mineralogist"—"A Chip of the Old Block" and "The Land of Drought." His companion was the cowboy to whom reference has also been made. This Gordon was the son of Robert Harold Gordon, Sr. The mysterious disappearances of both of these

men have already been referred to in the Prologue to the first volume.

The above incident, therefore, takes us back to the time when Robert Harold Gordon, Jr., while on a search for his father, had mysteriously disappeared.

The cowboy who had heard the conversation between the Indian and Gordon, turning to him, said:

"Ye'd better be careful. I don't give a hang fer these Injuns. He may be laying a trap fer ye."

Gordon made no reply but, turning to the Indian, said:

"White medicine man would talk alone with his guide. He will be back in a few minutes. Wait here."

The Indian seemed satisfied with the arrangement, and said:

"Indian set no trap. Friend of white man," and walked away as if to give the two men an opportunity to talk privately.

"Pete," said Gordon to the cowboy guide, after going a short distance from the Indian, "you know I came to this place in search of my father. As far as I can find out, he was last seen alive in this neighborhood. I shall go with the Indian. It may be that I can learn something that will help me. Moreover, if there is a sick white man in the neighborhood, I may be able to do something for him. I cannot at least refuse to go to see him. We can leave our horses tethered. Come with me and keep a close watch on the Indian."

"All right," was the reply. "I'm with you. I'll keep my eyes on the feller."

Gordon beckoned the Indian to come back to him. In the meanwhile Pete made arrangements for shackling the horses.

Seeing what the cowboy was doing, the Indian said:

"Lead horses this way. Indian show you better place not far from here to leave them."

"What do you say?" inquired the cowboy of Gordon. "Shall I leave 'em here, or shall we see what kind of a place the Injun hez fer 'em?"

Before answering, Gordon, turning to the Indian, inquired:

"How far from here is the sick man?"

"Sick man in that direction," the Indian replied, pointing to the northeast; and then pointing to the sun, he added: "If we walk quick will see him before sun half-down.

"About two hours off," said Gordon. "I guess we'll go, Pete."

Bidding the Indian show them the way, the two men led their horses and followed him.

From where they were standing, it did not seem as if there was any possible path down the almost precipitous walls of the cañon. The Indian, however, led them to a place that descended by a fairly steep slope of three or four hundred feet until it reached the part of the gorge where the walls formed an almost perpendicular descent to the stream below. Along this slope, a rough zigzag path had been cut in the rock

that the sure-footed horses had no difficulty in following. It was not a path that a tenderfoot would have cared to take in the absence of full daylight; for it was so narrow that a single misstep would have led to certain death on the rocks below.

At first the Indian led the way slowly, but as soon as he saw that the men following him were used to such paths he quickened his pace, closely followed by his two companions.

A rapid walk of about a quarter of an hour brought them to a place where the path led along another narrow ledge on top of a steep precipice that rose almost perpendicularly. This path was about two hundred feet below the top of the cañon, and eight hundred feet above the stream. It was so narrow that, although they kept close to the perpendicular wall, they were almost on the edge of the precipice on the other side. This continued for about five minutes when the path suddenly stopped, blocked, it seemed, by a steep wall that rose directly in front.

- "Reckon we kain't go any further," said the cowboy to his companion.
- "It looks so, Pete," replied the other; but the Indian hearing the remark, replied:
- "Follow Awake-in-the-Night. He find heap good place to leave horses."

The mention of leaving the horses on the narrow ledge on which they were then standing was too much for Pete, who expressed his opinion in language very unsuitable for polite company. The Indian took no

notice of what the man was saying, but merely remarked:

"Follow Awake-in-the-Night. He show good place to leave horses," and plunging apparently directly into the face of the precipice, his companions, who followed him, entered a cave, or more correctly a cliff house, that had been dug out of softer rock to a sufficient extent to form excellent quarters for horses.

"Heap good place to leave horses, medicine man?" inquired Awake-in-the-Night.

"It is a good place," said Gordon.

"It be a bully place," added Pete.

Horses had evidently often been kept in the place. An abundance of excellent fodder had been suitably collected here, and rings provided so that they could readily be tied. The animals appeared satisfied with their quarters; for, after drinking at a rude water trough fashioned by hollowing out the log of a tree, they began eating the fodder prepared. The trough had been placed immediately below a crevice of the rock from which a slender stream of water was flowing.

As soon as their horses had been secured and provided for, Awake-in-the-Night remarked:

"Come quick! White man very sick. Needs medicine man heap bad."

"In what direction do we go?" inquired Gordon.
"Must we go back the way we came? I don't see how we can go farther in this direction."

The Indian said nothing except to take the two men

by the hands, leading them a short distance into the cave. At first it was so dark that they could distinguish nothing around them, but after proceeding a short distance a faint light was seen shining ahead.

Quickly reaching the place they saw, cut in the wall of the precipice, a zigzag series of rough steps that after a toilsome climb led down to the bottom of the cañon. Here they found a narrow but fairly comfortable path by the side of the stream, over which they passed rapidly.

"Cap," said the cowboy to Gordon, "this here would be an ornery place fer a feller to be caught in ef it should begin to rain hard."

"Right you are, Pete," was the reply. "But we'll keep on the outlook for that."

The Indian, who had heard their conversation, replied:

"If rain comes, Awake-in-the-Night will show white men a path higher up where water cannot reach."

The two men silently followed their guide for about two hours. Shut up as they were in the narrow gorge, they could not see the position of the sun, but Gordon, who had spent many an hour in the cañons in his geological work, correctly estimated that they had still about two hours of sunlight. Turning to his companion, he said:

"According to what the Indian told us, we have been two hours on the go, Pete. Yes," he added to himself, looking at his watch, "that's about what my watch says. We should be near the injured man."

It was evident that but little the white man said was not understood by Awake-in-the-Night; for, as soon as Gordon had ceased speaking, he said:

"White medicine man right. See smoke," and pointed up the cañon. "Sick man lying by fire. Hope he not dead yet."

Walking more rapidly they came in a few moments to the side of a fire that had been built on a level spot about fifty feet above the surface of the stream. Some one, presumably the Indian, had left additional fuel near it, that the sick man had evidently been unable to place on the fire, for it had nearly died down. Lying near it, on a rude bed of leaves, was a man about forty years of age whose hair and beard were jet black.

"I reckon he be one of them Mormon fellers, cap," said Pete. "These be the chaps what come here from Salt Lake City, or some other Mormon town, and take up the best mineral lands that kin be found. But I reckon this chap's mineral lands won't do him much good. He looks as ef he war about ready to take his last ride."

Without heeding his companion, Gordon approached the man, and kneeling down took his hand and began feeling his pulse.

"The man is badly injured," said he to his companion. "I fear he is dying now. He is unconscious, and his pulse is so feeble I can scarcely feel it."

"I reckon ye're right, cap. He looks as ef he whar a'most ready to hand in his chips," said Pete.

B

"Hold up his head, Pete," was the reply; "I'll try to get a few drops of brandy down his throat. I hope it will revive him, if only for a sufficient time to tell us who he is and whether there is anything we can do for him."

It was not until brandy had been given at short intervals that the man opened his eyes and said in a faint voice:

"How long—have I to live, stranger?—Don't hesitate to tell me—I am not afraid to die."

Gordon, who had considerable knowledge of medicine for one outside the profession, had already carefully noted that the man was much bruised and had evidently had a severe fall. Moreover, he was apparently unable to move either legs or arms. The chances, therefore, were that he had been paralyzed, and that most probably a serious injury had happened to the spinal column.

"You are badly hurt," replied Gordon, "but don't think about dying. I may be able to be of much help to you."

"I know I can't live," said the man in a weak voice. "But tell me—can you keep me—alive for half an hour?"

"I think I can promise that," was the reply.

On hearing this the injured man said:

"Ask your guide and—the Indian to leave us. I have something—I wish to tell you—privately."

The Indian made no objections to the man's request, but moved off of his own accord to such a dis-

tance that he could not possibly overhear what was said. Neither for that matter did the cowboy object, for, silently, he too followed the Indian.

As soon as they were alone, Gordon gave the injured man another swallow of brandy, when he said:

"I've much—to tell you. Swear—you will keep secret what I say, and will—do what I ask."

"If I can honorably keep silent, I promise to do so," replied Gordon. "If what you wish me to do is what I can do without breaking the law, I promise to do it for you."

"That's all—I ask," said the man.

Apparently satisfied by the conditional promise, the dying man now made a supreme effort to tell his story. After a few moments, during which he looked earnestly into Gordon's face as if to read the character of the man, he inquired:

"Do you know—anything—about geology and mineralogy?"

"I am a professional geologist and mineralogist," was the reply.

"Thank God for that," was the reply. "I wish to tell you," he said in a weak, faltering voice, every now and then dropping a word or two or making a slight pause, "of a wonderfully rich quartz vein—free-milling gold—not far from here. Promise me—if I tell you where to find it—you will file claims—United States—in name of Robert Harold Gordon, Sr."

"What name did you say?" inquired Gordon in surprise.

"Robert Harold Gordon, Sr.—he is its true discoverer—at least after the ancient—cliff-dwellers who had—begun to mine it. It was he who first definitely traced the vein—and told me about it. I promised to have claims made out for it in his name."

"Who is this Robert Harold Gordon, Sr.?" inquired Gordon anxiously. "Why don't he file claims for himself? Is he still living?"

"One question—at a time," was the reply. "I don't know—how to answer—first question—is he still living?"

"That should be a simple enough question," replied Gordon. "The man must be either living or dead."

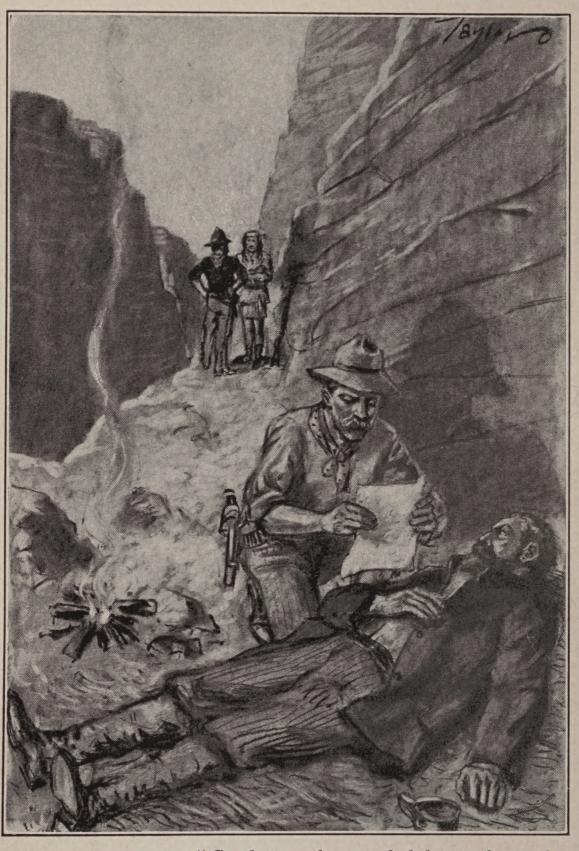
"I'm not—sure of that," said the sick man faintly. "In one sense—Robert Harold Gordon is dead. In another sense—he is living."

"What do you mean?" inquired Gordon anxiously.

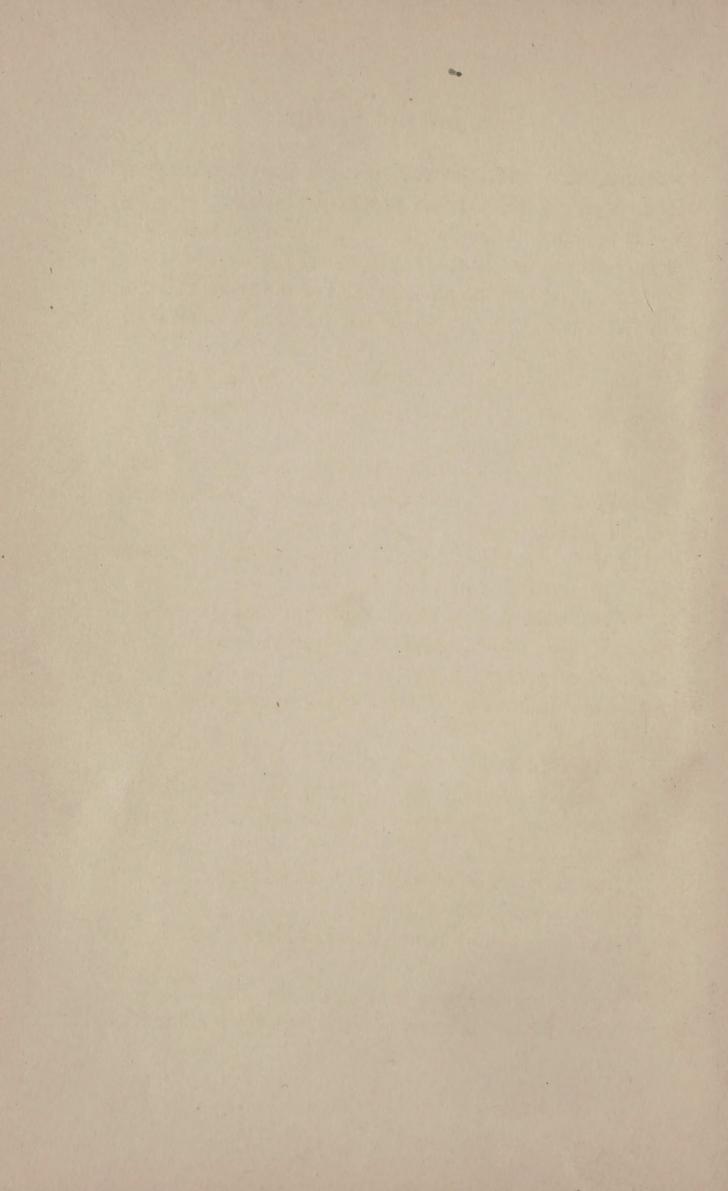
"I mean—he is dead as far as—knowledge of himself is concerned. He no more knows—his name or where he came from—than he would if he had been dead a thousand years. In that sense he is dead. But in another sense—he is fully alive."

"What is it he remembers?" inquired Gordon.
"In what sense does he still live?"

"He was—or—rather is—like yourself a geologist—and mineralogist. He remembers everything—about his profession as well as ever. Can trace—direction of veins—tell the names of minerals, make plans for underground leads—and superintend the



"Gordon took a sealed letter from the pocket referred to" Page 21



working of a mine as well—as any man now living. In everything else—he is practically dead."

While speaking, the dying man, who had been closely examining Gordon's features, said:

"Stranger, excuse me, but that man—Robert Harold Gordon, Sr., looks—like you—enough to be your father."

"He is my father," was the reply. "It was in an endeavor to find him, if living, that I have come to this part of the country."

"Again I say—God be thanked," replied the man. "I am now sure—you will—do all you can—file claims on this quartz vein."

"I will," was the reply. "Now tell me all about the man and the vein."

"First—about the vein," said the man in a still weaker voice. "Put your hand—pocket—of my coat. No—other pocket."

Gordon took a sealed letter from the pocket referred to.

"Is this the one?" he inquired.

"Yes," replied the man; "it gives—full—description—of vein. Where it is—and what has been done with it——"

"But tell me," inquired Gordon anxiously, "where is Robert Harold Gordon, Sr.?"

"Have you—ever heard of—the Mesa Verde?" inquired the man.

"Yes; I know where it is," was the reply.

"Your father is now-in a large cliff village on

wall of cañon on—one of the tributary streams of the —Rio Mancos—far above where it empties into the—San Juan River."

- "Is he alone?"
- "No," was the reply; "there are a number of— Danites and Indians with him."
 - "Has he been there long?" inquired Gordon.
- "Off and on—in different parts—of the Colorado River—and its tributaries—for about five years—not always in same place. Although he has lost his reason—he still retains his knowledge of geology—is so great a geologist and mineralogist that he is held in great esteem. He is now in the power of the—Danites and some Indians. If you see him—be careful—I am sure they will not let him—go with you."

The dying man's voice was growing very feeble. Had it not been for an occasional swallow of brandy he would have been unable to finish what he was saying. Gordon succeeded, however, in obtaining some additional information from the sick man that he was a Mormon; that his name was Ephraim Smith; that he had fallen out with the leaders because he had refused to reveal the position of the gold vein; that it was during an escape he had made, because they were endeavoring to extort this knowledge from him by torture, that he had met with an accident due to a fall that had left him in the dying condition in which Gordon had found him.

"Tell me," said Gordon, leaning down and talking directly into the man's ear, "how can I find my father,

and can I trust to the honesty of Awake-in-the-Night?"

- "Awake-in-the-Night-will show you the way."
- "Can I trust in his honesty?"
- "You can trust him," was the reply; "but—" and then before he could complete what he was about to say the man died.

Beckoning to the cowboy and the Indian these two came forward, when Awake-in-the-Night said:

- "Man dead? White medicine man came too late to cure?"
- "Yes, the man is dead," was the reply. "I got here too late to cure him."

CHAPTER II

ROBERT HAROLD GORDON, SENIOR

"You ask me to undertake a new piece of work before I have finished that on which I am already engaged."

"Well, suppose I do; what is that to a brainy mining engineer and geologist like you?"

The voice of the first speaker had a querulous tone. It came from a man of about sixty-five, with snow-white hair and beard, and to all appearances in excellent health. But there was a look about his eyes that would have led a close observer to believe he was not entirely in his right mind. Not that such an idea could possibly have been based on the remarks he had just made. As long as he was talking about mining, geology, and mineralogy, he spoke with rare intelligence; but change the subject to anything else and he was unable to speak connectedly, but employed a jumble of words that meant nothing. When, therefore, as in this case, the man who had been speaking remarked:

"Well, suppose I do; what is that to a brainy mining engineer and geologist like you," he smiled and said:

"That's true; but don't forget I have not completed the work at which I am now engaged. It has already taken me two months. I shall need at least three months more to complete it. If I leave it now and take

up new work, it would take me a long time before I could intelligently go on with what I am now at. Give me time to finish it, and then I'll be ready for any other work you may have for me."

"Agreed," replied the man. "I'll give you all the

extra time you need."

The first speaker was Robert Harold Gordon, Sr. The man to whom he had been talking was Joseph Smith, a Danite or Mormon, a descendant of the great Joseph Smith, the founder of the Mormon Church. This descendant of the early Smith had left Salt Lake City many years before, and had traveled over Utah, Nevada, Colorado, Arizona, New Mexico, and California in company with a band of Danites, of whom he was leader. He had taken up a number of valuable mining claims in these regions, and had enrolled a number of Apache Indians in his company.

Joseph Smith had formed a plan for building, in northeastern New Mexico, a Mormon temple that would rival in size and beauty the great temple in Salt Lake City. For this he needed a large sum of money. This he had been slowly accumulating by means of valuable gold and silver properties he had taken up under the mining laws of the United States.

As is well known, the Mormons are extremely jealous of prospectors, geologists, and mineralogists, whom they regard as their rivals in prospecting and mining. They look on the mineral lands of the great southwestern part of the United States as their own; they therefore consider all "Gentiles," as they call

those outside, as intruders, or, indeed, even as thieves, and use every method known to drive them out of the country, and especially from the neighborhood of the rich mineral lands. When peaceful means fail, they do not hesitate to murder the intruders, either themselves or through the Apaches, or other Indian tribes, with whom they keep on good terms. Many a prospector from the East or the middle West, who has mysteriously disappeared in this section of country, has in all probability been murdered by the Danites, bands of Mormons known as "The Destroying Angels."

It was about six years before the opening of this volume that Robert Harold Gordon, Sr., had disappeared as far as could be learned, in the very section in which Robert Harold Gordon, Jr., and his cowboy guide had been met by Awake-in-the-Night and conducted to the dying Mormon. The elder Gordon was then hot on the track of a great gold mine, of which various rumors had been circulated by both Mormons and Gentiles. This mine, it was said, had been opened up many generations before by some of the cliff-dwellers. But up to this time no one had been able to relocate it, although many had made an almost continual search for it.

The Mormons had already located a number of excellent mineral claims in this part of the country. When they heard, therefore, through their scouts, that a prospector, accompanied by a Chinese cook and an Indian, were engaged in examining the land in this district, orders were given to stop it at any risk.

In obedience to these orders, the three men were suddenly attacked and Gordon's Indian guide was killed. The Chinese cook surrendered unconditionally and, a cook being needed at that time by the Mormons, his life was spared and he was taken into their employ.

The intention had been to kill Robert Harold Gordon, Sr. Indeed, he had been given so severe a blow on the head that he was believed to be dead, and an Indian, Awake-in-the-Night, was ordered to bury him. He was still alive, however, and hovered between life and death for several weeks. He was carefully attended during all this time by the Indian who remembered him as the white man who, several years before, had saved his life by killing a mountain lion when it was about to spring upon him, in the great Colorado Desert.

When the Mormons learned that the geologist still lived, it was determined by their leader to kill him, but the Indian pleaded for his life, explaining that the man had entirely lost his mind, and remembered nothing whatever concerning his past life. He was, therefore, permitted to live and assigned some menial work.

It is a curious fact that uncivilized races do not look on imbeciles in the unfavorable light in which they are regarded by civilized man. On the contrary, they often credit them with a higher intelligence than that of more vigorous minds. This was the case with Awake-in-the-Night. It was, perhaps, mainly for this reason, although to some extent because of the service Gordon had rendered him in the past, that the Indian

gladly undertook the general care of the man and spent much of his time with him, not only while engaged in tasks that had been jointly assigned them, but also when permitting the man to accompany him on horseback to different parts of the great Mesa Verde. It was in this mesa, in a cliff village, situated in a deep cañon in the southwestern part, that the Mormons lived while in this part of the country. During Gordon's captivity, therefore, the two men were together a great part of the time. The particular cliff house in which the Danites occasionally lived contained a great estufa, or room, in which they assembled while resting or smoking. When they had satisfied themselves that the geologist had lost all reasoning powers, and did not even remember his own name, no objection was made to his freely wandering almost anywhere with Awake-in-the-Night.

One day, while riding with Awake-in-the-Night over a portion of the mesa situated many miles from the main cliff house, Gordon suddenly became interested in something he saw in the ground. Dismounting from his horse he began carefully examining and tracing the outcroppings of a great fissure vein. While doing this, to his great surprise Awake-in-the-Night heard him talking intelligently, although to himself rather than to any one else. As this had never before occurred since his injury, Awake-in-the-Night listened carefully.

"It is a true fissure vein," said Gordon; "fully fifty feet in width. Unless I am greatly mistaken, it con-

tains large quantities of free-milling gold, for I can see small particles of it here." And then turning to the Indian he said: "Awake-in-the-Night, let us hurry back to the estufa. I wish to get my magnifying-glass, hammer and chisel, notebook and gold pan. See, I have found a gold-bearing fissure vein."

Greatly pleased at the wonderful change in the man's mind, the Indian said:

"Awake-in-the-Night will go back with you and get what you ask for."

"I shall have to remain here for several days," said Gordon, "so get all that will be needed if we stay away for that time."

As Awake-in-the-Night was getting ready to go back with him to the estufa, Gordon said:

"Wait a few minutes longer until I get specimens of the free-milling gold quartz."

This was finally done, and the two men hurried back to the estufa.

When Joseph Smith, the leader of the Danites, and his companions heard of the wonderful change that had come over Gordon, and saw the fragment of the vein-matter Gordon had brought with him, they were greatly interested. It surprised them to be assured that Gordon had regained his mind, at least so far as to be able to recognize a fissure vein.

At first Smith was doubtful, thinking the Indian had made a mistake, but after conversing with Gordon and hearing him speak in a most intelligent way concerning what he had found, and give his reasons for

his belief in its being a true fissure vein, he became greatly interested. Getting all the things Gordon had asked for, he, with several of his Mormon companions, went with him and the Indian in order to inspect the new find.

Though neither a geologist nor mineralogist, Smith knew enough of mining to feel assured that the newly discovered vein would probably prove of great value, especially when Gordon had hurriedly accompanied him on horseback along its outcrop for several miles and assured him that, considering the nature of the country beyond, the vein probably continued very much farther.

Turning to his Mormon companions, Smith remarked:

"We will stake out claims on the vein and file them in the United States office. Before doing this we must get a competent mining engineer and geologist to lay out these claims, examine the vein, and ascertain how far across the country it actually extends, not only in the direction in which we have already followed it, but also in the opposite direction."

Gordon, who had heard the conversation, turning to Smith, said:

"I am a mining engineer and geologist. I'll trace the outcrop across the country and lay out claims for you."

Without replying directly to Gordon's remark, Joseph Smith turned to his companions and said in a low voice he believed Gordon would not be able to hear:

"I know the man has done excellent work of this character. Indeed, I have heard that there are few, if any, mining engineers in the country who equal him in his profession. But he has been almost an imbecile for so long that I fear he may at any time again completely lose his mind."

But low as the voice of Smith and his companions had been during the conversation, Gordon had heard them. Apparently he failed to understand anything except that part relating to geology and mining. Asking Smith and his companions to follow him, he again began pointing out the peculiarities of the vein. Moreover, before long he had made another discovery, for, going at some distance to the left of the vein he first discovered, he remarked:

"Here is another vein running parallel to the first."

He then insisted on the men following him along the new vein, and although its indications were not so clearly marked as in the one first discovered, still, when intelligently pointed out by Gordon, there could be no doubt about the correctness of the second find.

"The man has thoroughly recovered his mind," Smith said, turning to his companions, "so far as his old profession is concerned, although it would seem that otherwise it is still a complete blank."

"If he has regained his knowledge of mining, geology, and mineralogy, could he not be of great service to us?" remarked one.

"He could," said another. "The fact that his mind is a blank concerning all the rest of his life is far from

being a disadvantage to us, since we can safely employ him for this work."

"Right you are," said Smith; "we will keep the man for this work hereafter. The only danger is that when he is taken from one of our properties to another he may be seen and recognized by some of his old friends."

"I reckon," said another Mormon, who had not yet spoken, and who from his speech was evidently Eastern born, "there beant no resk in thet. As ye know, the trails in this country air but few; at least the trails thet be known to the Gentiles. But that be a plenty of trails thet could be taken in going from mine to mine without the resk of coming across people what knew the man. Besides," he added, "sense the light went out of his mind, with the blow on his head, he looks different from what I remember him when he fust come here."

The plan of employing Gordon as their mining engineer was adopted. The work he did for them was of the highest type. Never before had such work been done so thoroughly. From that time on, therefore, Gordon was practically given full liberty, although Awake-in-the-Night was directed always to be with him. Under these circumstances the two men being together so much of their time became sincerely attached to each other.

It was no hardship for Gordon to remain away from his people. To him these people no longer had any existence. They never entered into his mind. More-

over, the work in which he was now engaged was work he had done for a large portion of his life. He was therefore happy, and instead of becoming physically weaker, increased in health until he was in much better physical condition than when he had met with his injuries. In this way more than five years had passed, during nearly all of which time Awake-in-the-Night remained his friend and caretaker.

The confidence of the Mormons in Gordon at last became so great that he was sent from mine to mine in different parts of the great Southwest, sometimes in company with Awake-in-the-Night, and sometimes with some of the others. About this time, Mr. Christian, Professor Engleman, together with Robert Harold Gordon, 3rd, and his boy friends were about leaving El Paso for the Colorado Desert. The Danites had located an unusually rich mine in this desert. The mine was the one referred to in the second volume as the "Pegleg Smith Lost Gold Mine," and the elder Gordon had been sent to examine it.

It remains now to be explained how it was that Awake-in-the-Night was with the party of Christian and Engleman. As will be seen in the next chapter, Robert Gordon, Jr., had gone with Pete to meet his father, and during this time both men had been taken captives by the Danites.

Some time after the capture of Robert Harold Gordon, Jr., and Pete, Smith and his people had received reports from their spies that Christian and Engleman,

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two noted geologists and mining engineers, were on their way to make an examination of a number of mining properties in that portion of the great Colorado Desert that was near the Pegleg Smith Mine. The Mormons had acquired such confidence in Gordon senior, that Awake-in-the-Night was not with him so much as formerly, and he was permitted to be away for fairly long periods in order to visit his tribe, as well as to pick up what money he could in guiding parties through the regions; for, as already mentioned, Awake-in-the-Night was better acquainted with the district, especially the deep cañons in the upper tributaries of the Colorado, than any other living man.

Awake-in-the-Night was a confirmed gambler, and enjoyed his game of draw poker probably as much as any of the degraded white people. Nor was the game unknown to the Danites. They were, therefore, willing that the Indian should go away even for long periods, for when he came back he generally had a considerable supply of money which was soon transferred to their pockets.

There was another reason for their willingness to let Awake-in-the-Night go. During his expeditions to different parts of the territory, he sent them considerable information concerning the movements of mining engineers, geologists, and prospectors. Indeed, it was Awake-in-the-Night who had furnished them with most of the information concerning the movements of Christian and Engleman. They were, therefore, pleased to learn that he had already engaged himself

to this party to look after their horses and to aid them generally.

Colorado Bill, as has been related in "The Land of Drought," was acquainted with Awake-in-the-Night, and suspected that he was in some way or other connected with certain Mormons or Danites who held valuable mining claims in the district. He did not, however, know that Robert Harold Gordon, Sr., or his son, Robert Harold Gordon, Jr., was with them.

As related in the preceding volume, Awake-in-the-Night had become greatly attached to both the grandson, Robert, as well as to Happy, and at last determined to acquaint the lad, Robert, as to the whereabouts of both his grandfather and father; and this, as we have seen, he has already done.

Joseph Smith had a twin brother named Ephraim Smith. This was the man whose tragic death has been referred to in the previous chapter. Although brothers, Ephraim and Joseph had never lived peaceably together. Each was intensely jealous of the other. Ephraim, like his brother, also wished to give his name to a new Mormon temple. He did not at all relish being hid in the shadow of his brother's greatness. One day, therefore, when Gordon at last discovered in a cañon the rich free-milling gold vein for which he had so long been looking, Ephraim and Awake-in-the-Night were the only men to whom he told of the discovery and its location. Awake-in-the-Night was wary enough to deny all knowledge either of its existence or location. As for Ephraim Smith, he gloried in the

fact that his brother Joseph was ignorant of its location, and flatly refused to give him any information whatever concerning it.

Again and again did Joseph endeavor to force his brother to reveal the location of the vein. Again and again did he endeavor to obtain this information from Awake-in-the-Night, but that wary old fellow always claimed he knew nothing. Again and again did Joseph Smith endeavor to obtain the information from Gordon, but, curiously enough, on this matter Gordon's mind refused to act. He apparently was unable to distinguish this vein from others; so that, angered at being baffled in his endeavors to force his brother to divulge the secret, Joseph Smith put him to torture in order to compel him to give him the much-desired information.

It was during this torture that Ephraim Smith, liberated by Awake-in-the-Night without the knowledge of Joseph Smith, escaped. Joseph Smith and his followers nearly recaptured Ephraim, but under the guidance of Awake-in-the-Night he succeeded in escaping. During this escape, however, he accidentally fell from the wall of a precipice, suffering injuries from which, as we have seen, he died. It was at this time that Awake-in-the-Night had brought Robert Harold Gordon, Jr., to the injured man in time to witness his death and to receive from him the assurance that his father was still living and had succeeded in locating the long-sought-for mine of free-milling gold.

CHAPTER III

GORDON AND PETE TAKEN CAPTIVES BY THE DANITES

But let us now return to Robert Harold Gordon, Jr., and his cowboy Pete, together with the Indian, Awake-in-the-Night. It was about two hours from sundown when the white man had died. They therefore determined to leave his body until the next morning when it was buried, Gordon reading the Episcopal burial service.

It was indeed astonishing news Robert Gordon, Jr., had just heard from the dying man. The sealed packet, he was assured, described the location and particulars of the free-milling gold quartz vein in the cañon he had so long been trying to locate. But what most astounded and delighted him was the request that he should enter mining claims for the quartz vein in the name of his father, who, he had been assured, was living and in the neighborhood, and that Awake-in-the-Night could show him where.

Anxious to see his father, Gordon took the first opportunity to inform the Indian what the dying man had told him, although he said nothing about the gold vein.

"Awake-in-the-Night," he said, "the man who has just died told me that the white man at the Mesa

Verde, you are so much with, is my father; that you could take me to see him if you would. Will you do this for me?"

Awake-in-the-Night was greatly surprised; and not only surprised, but also troubled. Concealing his feelings, he replied:

"Awake-in-the-Night glad your father is living. Will take you soon to see him. But must first go and see about the horses. Mesa Verde over there," he added, pointing in a direction opposite to that in which they had left the horses. "Will be back soon." He then went rapidly away.

"Pete," called Gordon to the cowboy, "Awake-in-the-Night has gone to see about the horses; come and help me watch the body of the dead man. I was told some very astonishing things by the dying man. One of these I can tell you."

"All right," replied Pete. "Tell me all ye wish to and keep the rest private like. I kin onderstand thet the dying man may hev told ye about things ye'd rather keep to yerself."

"He told me my father is living, Pete; and Awakein-the-Night promises to take me to see him."

"Shake," said Pete, greatly delighted at the wonderful news. "This be great news. Whar be yer dad now?"

"In the Mesa Verde. You know the place, don't you?"

"Know the Mesa Verde?" was the reply; "I do fer sure. It be the most beautiful and the most ornery

place in these here diggings. It be what you Eastern folks would call awful pretty. I am not denying thet as fer as its rocks, waters, and gulches are consarned, it makes suthen to look at what be hard to beat. But thar be nothing pretty about the people what live thar. It hez a mixture of Mormons, Danites, Navajo, and Apache Indians thet make it the wust place you kin imagine. Ef ye hev made up yer mind to go thar to see yer father, ye must do it with yer eyes open and yer hand on yer gun. Ye will hev a good chance of disappearing thar as yer father hez done. How long hez it been sense he wuz last heard from?"

"About five years," was the reply.

"What wuz it thet hez shut his mouth all this time? Why hezn't he hollered out whar he be so thet his friends kin come and pay him a visit like?"

"I was told that my father has forgotten everything except geology and mining. I'll tell you the story of his disappearing, so far as it has been known to his Eastern friends. I have never told you about it, have I?"

"Nary a word except thet the old man disappeared suddent like about five years ago from some place near whar we now be."

"Listen then," continued Gordon. "As far as I know, the last white man who saw my father alive was a mining engineer named John Christian. This man camped with my father on the night before he disappeared. My father had with him an Indian guide and a Chinese cook. Christian recognized the guide as a dangerous man, who was believed, several years before,

to have murdered a white man whom he had been guiding, and cautioned him to keep on the lookout. Father thanked his friend for the warning and promised to be cautious."

"A feller is generally on the safe side ef he looks out fer every Injun," remarked Pete.

"That appears to have been the belief of Mr. Christian," replied Gordon. "Indeed, I am told that almost the last thing he said to my father, when leaving the next morning, was to caution him again not to put any trust in his Indian guide. Now, as far as I have been able to find out, my father has never been seen by his white friends since leaving Christian that morning so many years ago."

"Did Smith tell ye what happened to your father's party, and how it was he disappeared?"

"He did," was the reply. "As you know, the Mormons are very jealous of the people they call Gentiles, especially when taking up mineral lands in this region.

"A society of Mormons known as the Danites, or Avenging Angels, commanded by a Joseph Smith, a brother of the Ephraim Smith whose body is here awaiting burial, had been watching and following my father's party closely and concluded from their actions that they were searching for mineral lands in the immediate neighborhood of a number of valuable properties they themselves had recently discovered, but which were not yet secured by claims."

"I hev heerd of them Danites or Avenging Angels, cap," interposed Pete. "They orter be called mur-

dering devils. The Mormons may be bad, but the common ones are decent fellers when sized up along-side the Danites. I hev heerd say that that be no Danites now, but I know better. They keep themselves more scarce like, but they air still in these parts and be even wuss than they wuz long ago."

"Doubtless you are right, Pete," said Gordon. "It was these people who determined to drive my father away by fair means, and if not to get rid of him by murder."

"If they did murder, it would not be fer the fust time," remarked Pete. "A great many years ago thet's the way they allus fixed fellers what come into the country, killin' them open like. Now thet Uncle Sam knows more about 'em, they are more keerful the way they act. They git those varmints, the Injuns, to do the killin' fer 'em. Wall," continued Pete, "did they kill off all the party except the old man?"

"No," was the reply; "only the Indian. They spared the life of the Chinese cook. They had intended to murder father also, and struck him so severe a blow on his head with a stock of a gun that they believed him to be dead, and ordered the Indian, Awake-in-the-Night, to bury him. Father was not dead, but hovered for several days between life and death."

"But why did not Awake-in-the-Night give yer dad another knock in the head and save trouble like?" inquired Pete.

"It appears that several years ago," said Gordon, that saved the Indian from a mountain lion

that was about to spring upon him. The man had sworn by his gods that if he should ever have the opportunity he would repay the white man for his kindness. He recognized my father as the man who had saved his life. Unknown to the Danites, he tenderly nursed him and brought him back to life."

"Is the old man still loose in his mind?" inquired Pete.

"That is the most wonderful part of the story, Pete," replied Gordon. "For a long time my father's memory was completely gone. He did not even know his own name. He had forgotten all about his people. He could not even speak connectedly, so that the Indian believed there would be no danger in permitting him to live. He was especially willing to do this, because one day father surprised him by discovering a valuable gold quartz vein, and began talking very intelligently about it."

"I say," exclaimed Pete, "thet beats eny yarn I hev ever heerd. It seems sorter improbable like thet a bright feller, like the old man, should fergit such things as his own name and the names of his old woman and kids, and yit hold on to them awful hard names wot geologists and mining-engineer fellers use."

"It does seem improbable, Pete," replied Gordon; "yet Ephraim Smith assured me of the truth of what he told me."

"And do I onderstand ye to tell me thet it be only on sich subjects as mines and minerals thet he kin talk continuous like?"

"That is right. Ephraim assured me that as far as all that pertains to his lifework is concerned his memory is excellent, but that on every other subject it is a blank. I understand that for many years the Mormons have been employing father as their mining engineer; that he has examined numerous properties for them, planned the underground work, and superintended mining operations."

"Thet story ye are tellin' beats all creation," remarked Pete. "Ef any feller wrote it down in a book people would call him a tarnation liar."

"That is very probable," replied Gordon. "At least," he added, "if the Mormon's yarn is correct." This latter, however, he only thought. He did not speak it aloud.

The above information so stunned Pete as to close his mouth for a while, but at length he said:

"I don't need ask ye ef ye be goin' to the Mesa Verde to see yer father."

"Of course I shall go there with Awake-in-the-Night. Would you not do so were you in my place?"

"I'd go fer sartin," replied Pete; "and yet I'm free to say I'd be mighty keerful just how I'd go. I reckon I'd not go bold like, but more like laying around as it were."

"Then you do not trust Awake-in-the-Night?"

"I don't trust any Injun what lives. I hev seed a-many of them, but hev never seen one I could trust straight through."

The two men remained talking until the return of

Awake-in-the-Night, to report in regard to the horses. After he had done this he said:

"Awake-in-the-Night has something to say to white medicine man."

"Shall I go away?" inquired Pete of his companion. Without waiting for Gordon to answer, Awake-in-the-Night said:

"No, stay here. Awake-in-the-Night speak to both of you."

"Trot on then," said Pete. "I'm listening."

Without paying any attention to Pete, the Indian turned to Gordon and said:

"Does white medicine man wish Awake-in-the-Night to speak to him?"

"Yes, tell me what you have to say," replied Gordon.

"It is this: the man you wish to see is a great friend of Awake-in-the-Night. When you said you are his son, Awake-in-the-Night heap worried. He make up his mind to say now to you and the other man, it is not safe to go to the Mesa Verde where your father is. Many bad men and bad Indians there. Maybe kill you. Maybe keep you prisoners. Yet, of course, you must see your father. Is Indian right?"

"You are right," was the reply. "I am determined to see my father. I have come many thousands of miles from the East to find him." Then fearing the Indian might not understand him, he added: "I have traveled for many, many moons. I have come here to try to find my father, and now I know where he is

I will certainly try to see him, no matter what I may risk in doing so."

"Bully for you!" said Pete. "That's the way to talk. I'll go along and back ye up."

A long conversation then occurred between the Indian and the white men, the Indian explaining that the prisoner was now given considerable liberty, and frequently left the cliffhouse where the Danites and their company spent most of their time, in excursions to different parts of the territory in company with Awake-in-the-Night or some other of the party. It was finally agreed that Awake-in-the-Night should return to the Danites and wait there until an opportunity permitted him to bring Gordon's father back with him. He promised to do this and return to them as soon as possible.

"What shall we do in the meanwhile?" inquired Gordon.

"Stay around here until Awake-in-the-Night returns. He will come back as soon as he can. Maybe in two days. Maybe in a week."

"What do you say, Pete?" inquired Gordon.

"I reckon we'll hev to wait," was the reply. "The plan this Injun hez laid seems sensible like. I kain't think of a better one."

The plan was agreed on; the Indian left, and the men patiently waited his return.

Without going into a full description of what happened, it may be said that the two men waited for a

full week. During this time Gordon carefully read the sealed letter he had obtained from Ephraim Smith's pocket, and memorized what it contained, and then without saying anything to Pete burned it in the campfire.

When the Indian returned he was accompanied by a man with snow-white hair and beard. It was Gordon's father.

Five years and the hardships he had undergone had greatly altered his appearance, and the vacant look of his eyes had changed him still more, but his son instantly recognized him.

"Father!" cried Gordon, falling on his neck and kissing him, "do you not recognize me? I am your son Robert. Your name is Robert Harold Gordon. Don't you remember me? Your wife, my mother, is still living. So is my wife, and your grandson, Robert Harold Gordon 3rd, a splendid lad." The son hoped that this mention of the absent ones would awake his memory.

But to his great anguish his father completely failed to recognize him. He seemed surprised that a stranger should treat him in such a familiar way. He then began to speak an unintelligible jargon of words that showed he had completely lost all memory of himself, of his people, or of the meaning of the words, except as they related to the subject of his lifework.

Seeing how the father's condition troubled his son, Awake-in-the-Night said:

"Talk to your father about mines or minerals."

As soon as this was done the old man entered into an intelligent conversation, speaking about the work he had done in that line, without, however, the slightest recognition of the one he was talking to.

"I will endeavor to persuade my father to go back to the East with me," said Gordon to himself. "I feel sure that once he is back among the old familiar scenes and surrounded by the dear home faces he will recover. Will you not go home with me, father?" he added aloud. "Mother is waiting to welcome you. My wife and children will also be glad to see you. Come home with me."

But to the weakened mind of the old man, his family had no existence. Indeed, it is doubtful if he knew what his son wanted him to do until he changed his appeal, suggesting that it was not the people in the East he wanted his father to visit, but a great gold and copper mine that no other mining man had been able intelligently to superintend. That for this purpose his great learning and skill were necessary. Then the old man became interested. Still, he objected to going.

"I have here," he said, "all the work I can undertake for a long while. When this is done I will talk about going East with you, but I cannot think for a moment of leaving now."

We will pass over the events that occurred shortly afterward. Gordon and Pete refused to leave the neighborhood, hoping that some change might come over the old man. They were at last discovered by the Danites, taken captives, and imprisoned in a lonely cliff

house in the neighborhood of the estufa of the cliff house in which they themselves were living.

The Mormons kept close watch over them, but as far as food and other comforts were concerned they treated them well. They were placed at some distance from the cliff village in a lonely house, near the top of a high precipitous wall that formed one of the sides of a deep cañon. Like most of the cliff houses in this region, the one selected as a prison had a southern exposure. At an earlier time it had evidently formed one of a row of houses that had been dug in a soft sand-stone between two parallel harder strata. But all of them, except the one in which Gordon and Pete were confined, had disappeared by the gradual waste of the rocks, acted on by the rain and frost.

The cliff house formed an ideal prison. It was accessible only by means of a cavelike entrance from above through a long gallery cut in the softer rock.

Exclusive of its cavelike entrance, the house consisted of a single room in which were fairly comfortable beds of dried leaves. A small level and open space extended from the front of the house to the edge of the precipice. Although its width was only twenty feet, yet it was wide enough to permit the men to rest comfortably in the sunlight when they so wished. Here, except in stormy weather, they spent most of their time in such ways as their ingenuity could devise.

It must not be supposed that they made no effort to escape. Both were so accustomed to the free life of the open air that their imprisonment chafed them no little.

The complete separation from his father, who was yet so near, almost drove the younger Gordon insane; and both he and Pete continued making careful examinations of the cave back of their room, as well as the sides of the precipice above and below them. But escape by either of these ways was impracticable.

"I reckon we will hev to bunk here," said Pete one day, "ontil these Mormon fellers let us out. Ef course we'll keep our eyes peeled, sense something may turn up to help us get away."

Nothing did turn up for nearly six months, until one day Joseph Smith came into the room and, calling Gordon aside, said:

- "Stranger, I have a proposition to make to you. Would you care to hear it?"
 - "What is it?" inquired Gordon.
- "You are a mining engineer, are you not?" inquired Smith.
 - "Yes," was the reply.
- "Would you be willing to help the man, who I understand is your father and is also a mining engineer, look after some of our mining properties?"
 - "Tell me just what you mean," replied Gordon.
- "I mean, are you willing to go out to do the work you are accustomed to do?"
- "And if I do this, what then? Will you give me my liberty?"
- "Never that," was the reply. "You can understand we can't take such a risk. But it would certainly be more pleasant for you to work than to stay here. Then

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too, you can see more of your father. When this work is done you must return here or to some other place like it. You needn't fear the work will soon be finished. There is plenty to do to keep you busy for many years. I don't expect an answer now," he continued; "I'll give you a few days to think the matter over."

"I'd do it," said Pete when they were again alone.

"It kin do ye no harm, and you kin be with your dad.

You may be able yet to get him to go with ye."

On the return of Smith a few days afterward, Gordon told him he would accept the proposition providing his companion, Pete, was permitted to accompany him. This, however, Smith absolutely refused to consider for a moment, so that Gordon, although reluctantly, agreed to accept the offer made to him.

When he informed Pete of his decision, that individual remarked:

"I ain't denyin' I'll be very lonely like, but I say go. You may find some chance to escape. Then I reckon ye would soon get enough white people to join ye to yank me out of this hole. And ef I ever escape," he said grimly, "I'll remember what I owe to that rascal, Joe Smith."

In this way it happened that the two men, father and son, were almost continually together during the working hours of the day. Although the father failed to recognize his son, yet he appeared happy to be with one who could talk intelligently on the subjects in which he was so deeply interested. They were always

accompanied by a number of guards, and this especially when traveling to distant mines.

It was in this manner that, about the time of the visit of Christian's party to the Colorado Desert, the two Gordons, in company with a number of Mormons and Indians, were actually on the plateau that Rob called the "Plateau of his Dream." This was when Rob, Happy, and Colorado Bill were sufficiently near to enable Rob to recognize the mesa and to see the arroya with its slender stream of water pouring down a steep descent. They returned to camp to bring their companions with them, intending to reach the summit, but were prevented by the astonishing news from a prospector, who had been camping near them, that a party of Indians and two white men could then be seen riding hurriedly toward the northeast.

CHAPTER IV

A COUNCIL OF WAR

But let us now return to the separate parties of our friends who, as related in the second volume of "The Young Mineralogist," had so strangely met at the northeast corner of Arizona, near the boundaries of Colorado, Utah, and New Mexico. Here the Russian Jew, Stanislaus Metchiniskoff, had attempted to hold up Happy. He had, indeed, succeeded in getting the drop on the lad, who when ordered to hold up his hands had not hesitated to do so. But Stanislaus Metchiniskoff was ignorant of the resources of his intended victim, who completely turned the tables on him, recovered the stolen emerald, and delivered him, a prisoner, to Ivan Petromelinski. Moreover, he handed the emerald to Blavinski, the Russian nobleman, who had accompanied our old friends, Blank, Petromelinski, and Francksen, in pursuit of the thieves. Here too, the party of Christian, Engleman, Robert, and his boy friends, together with Colorado Bill, Awake-in-the-Night, and Sam Lung, had arrived in hot pursuit of the band of Mormons and Indians.

Although the emerald was recovered and Metchinis-koff captured, yet Mashinsky escaped, as did also the band of Mormons and Indians with their two white captives.

But before saying anything further about this matter, it will be well, for the sake of those of our readers who have not read the first two volumes of "The Young Mineralogist," briefly to relate some of the important events contained in them, as well as to describe some of their principal characters.

In the first volume of the series, "A Chip of the Old Block; or, At the Bottom of the Ladder," a description is given in the prologue of the remarkable disappearance of Robert Harold Gordon, Sr., and, about five years afterward, of Robert Harold Gordon, Jr. As far as was known to his friends, these disappearances occurred in the neighborhood of the very place where the people above referred to had chanced to meet. This volume especially relates the adventures of Robert Harold Gordon 3rd, grandson and son of the two missing Gordons. Robert was a true chip of the old block, inheriting, as he did, from both grandfather and father much of their abilities. He had, however, remained long in ignorance of these abilities, so that, like many others, he might actually have gone to his grave without being aware of them.

Fortunately, Robert had two adult friends, John Alexander Christian and Prof. Joseph Jackson Engleman, both mining engineers, geologists, and mineralogists. Believing the lad had inherited abilities in the lines in which both grandfather and father had excelled, these men, especially Professor Engleman, succeeded in enabling Robert to discover his inheritance. Inviting him, with three of his boy friends, to call at

his office in Philadelphia, the professor gave each of them a number of carefully selected mineral specimens, the same specimens to each, and persuaded them to endeavor, by reading, to discover their correct names. This was done at a time when Engleman was about leaving the city on a somewhat prolonged professional trip. The boys were, therefore, obliged to depend entirely on their unaided efforts in puzzling out the names of the minerals.

Robert's three boy friends, who joined him in this study, were Ralph Earle Clinton, Emil Carl Schloss, and Norman Edwin Taggart. As these boys will figure extensively in this volume, it may be well to give a brief description of some of their peculiarities.

Ralph Earle Clinton was an unusual boy. He had accustomed himself to look on the bright side of life to such an extent that he had no difficulty, no matter what trouble occurred, in persuading himself that it was not a misfortune but, on the contrary, a wonderful piece of good luck. When, therefore, any trouble came, instead of bemoaning it as bad luck, he would begin carefully to think it over with the reasons he had for regarding it as good luck, would welcome each discovery with a smile that spread in a wonderful manner over his countenance. It was for this reason that the smile, instead of remaining unchanged, thus making his face repellent rather than attractive, was continually changing. His boy friends had, therefore, given him the name of "Happy," a name by which he was generally known.

Schloss, or, as the boys called him, "Emil," was especially fond of chemistry. With him it was a case where inherited abilities manifested themselves at an early age. At the time the story opens, Emil had built a laboratory in the cellar of his home in Philadelphia. Here the four lads spent much of their time in astounding chemical experiments, in their efforts to discover the composition and the names of their mineral specimens. That they did not bring this book to an untimely end by blowing or burning themselves up was due rather to a kindly dispensation of Providence than any special prudence on their part.

The third lad, Norman Edwin Taggart, called by his companions "Norman," belonged to an entirely different type. He had been endowed, naturally, with an unusually large head and marked mental abilities. He came from Boston and, although fortunate in the inheritance of brains, was extremely unfortunate in having foolish parents to care for him. They permitted the cultivation of the lad's brains to get so far ahead of his body, that when about fourteen, an age when the body should begin to take on the welldeveloped frame of coming manhood, it displayed spindling legs, thin arms, and so little physical strength that he was unable to carry out plans his brain might devise. Besides all this, he had been so separated from the companionship of healthy, growing boys, and so much associated with older people that, instead of talking like an ordinary boy, he employed the stilted speech of people scores of years his

senior. Fortunately, however, a companionship with boys like Robert, Happy, and Emil was beginning to bear fruit in a more natural speech and a more promising physical growth.

During their study of the mineralogical specimens, Robert and Happy had been able to give much help to a Philadelphia detective, a B. B. Blank, and a Russian nobleman, Blavinski, in regaining a valuable set of diamonds, together with a duplicate set that was being cut by August Wilfred Francksen, a lapidary, at his shop in Philadelphia. Although the diamonds were regained, the thieves, Stanislaus Metchiniskoff and Sigismund Mashinsky succeeded in escaping.

In the second volume, "The Land of Drought; or, Across the Great American Desert," a description is given of the adventures of Robert, Happy, and Norman, who had been taken by Christian and Engleman across the Colorado Desert, which they had visited professionally. The expedition was undertaken jointly by reason of rumors Christian had heard that two white men had been seen at different times in the desert as prisoners of a band of Mormons and Indians. Christian and Engleman's party had left Yuma, near the southwestern corner of Arizona, in company with Colorado Bill, a cowboy guide, an Indian known as Awake-in-the-Night, to look after the horses, and a Chinese cook named Sam Lung.

A brief explanation should be given here as to how the boys had been taken on such an expensive journey as that across the Colorado Desert. In order to

reward Robert and Happy for the services they had rendered him in the recovery of the Dimitri and Blavinski diamonds, Blavinski, the Russian nobleman, had sent Francksen a considerable sum of money that he asked should be expended, not by their families, but in something that would give the boys special pleasure. He begged Francksen and Engleman to act as trustees, and suggested that if Engleman was willing to take the boys with him on some of his mineralogical journeys, it would not only give them great pleasure, but would also be of special advantage in their study of mineralogy and geology.

The consent of the parents was obtained and this was done. As for Norman, who was a nephew of Professor Engleman, the professor took him along, paying the expenses out of his own pocket.

During the progress of the story much interesting information is given of the peculiarities of the plant and animal life of the desert, its climate, rainfall, etc. They had many exciting adventures. During this time both Happy and Robert succeeded in gaining the friendship of the Indian, Awake-in-the-Night, so that afterward, when they succeeded in almost overtaking the party of Mormons and Indians, the Indian assured Robert that the white men they had been following were undoubtedly his grandfather and father, and that the party was on the way to a part of Colorado known as the Mesa Verde. The account of their subsequent adventures is given in this volume of the series, "The Jaws of Death."

But let us now again return to the parties that, without intending to do so, had met at the northeastern corner of Arizona, near the Mesa Verde, at almost the very moment Happy had surprised and captured Metchiniskoff. Petromelinski had slipped the hand-cuffs on the man's wrists, left him in charge of Fred Loosing, with instructions to shoot him if he endeavored to escape, and had followed the party in an endeavor to capture Mashinsky. But they were unsuccessful. Mashinsky mysteriously disappeared, leaving no tracks or trail by which they were able to follow him.

When Petromelinski was introduced to Engleman, on his return to where Fred had been left with Metchiniskoff, he said:

"I received your various telegrams, Professor Engleman, and was greatly helped by them. I wish to thank you for the trouble you have taken in this matter."

"I am glad to be assured they were of use to you," was the reply. "Let me congratulate you on the recovery of the emerald and the arrest of the thief, Metchiniskoff. You and Mr. Blank have certainly handled this case with great ability."

"And so say I," remarked Blavinski.

"Yes, Blank and I have handled the case all right," said Petromelinski; "but it was this lad," he said, turning to Happy, "who did the trick in taking the man a prisoner and recovering the emerald. I only saw a part of what happened. I wish some of you who saw

all would tell me just what happened to the lad and how he took the man."

"Wall, stranger," said Colorado Bill, "thet Russian feller," pointing to the prisoner, "got the drop on Hap, this here lad," he said, pointing to Happy.

"' Hold up yer hands!' he cried.

- "Wall, Hap's no fool. He saw the feller's pistol pinting straight at his head and held up his hands immediate. But then, blame me," he said, rather to himself than to them, "the trick Hap played on him makes me laugh when I think of it.
- "'Hands up?' said Hap. 'Why, sartinly. Anything else ye want?'

"'Yes,' was the reply; 'chuck me yer gun.'

- "As Hap was about to do so the feller jumped right into the trap Hap had set fer him.
- "'Be keerful how you hold thet gun,' said the feller to Hap, 'or I'll fill ye with lead.'
- "'How do ye want me to hold it?' inquired Hap, innocent like.
 - "' Take it by the muzzle and then hand it to me."
- "Now here's whar the feller made a big mistake," said Bill, grinning. "Ye see, he didn't know what a slick feller Hap is, so when Hap, holding the gun by the muzzle, offered it to him the Russian chap lowered his gun to take it, when Hap, quicker than a wink, threw his gun into the air, ketched it by the handle, and sent a bullet plum into the man's hand, making him drop his gun.

"'I do this,' said Hap, 'to give ye a chance fer yer

life. Now, throw up yer hands,' and when he had done this, Hap said: 'Throw me thet emerald ye stole from the Czar of Russia,' but the feller was unwilling to do this, and sorter hesitated.

"'I don't know whether ye kin shoot or not,' he said.

"'Ye don't?' remarked Hap. 'Wall, then, to convince ye, I'll plug a hole through yer right ear.' And this he did to onct by a very pretty shot.

"'Ef ye're not convinced,' said Hap, 'I'll bore a similar hole through yer left ear. Shall I do it?'

"' No; I'm satisfied ye kin shoot,' said the feller.

"I don't have to tell ye the rest of what happened fer ye saw it," said Bill, turning to Petromelinski; "ye put the handcuffs on the feller, and ye," he said, turning to Blavinski, "took the emerald thet Hap handed to ye."

"You certainly handled this case wonderfully well, my lad," said Petromelinski. "If you would like to help me in my detective work I can offer you big pay. I'm sure you would make a great success."

"Thank you," said Happy, smiling; "I don't care to go into that business. I would rather remain with these gentlemen," turning to Christian and Engleman, "and try to learn to be a mining engineer."

Several hours had been expended in the unsuccessful hunt for Mashinsky, so that it was now supper-time. After supper they sat around the camp-fire talking of the many things that had occurred, and discussing the probability of the white men being with the Indians

and the men they were pursuing. It is true they had but little doubt about this, since, as related in the second volume, they had found on the body of the murdered Chinese cook, Gheng Lung, a ring that Robert recognized as having belonged to his father. They, therefore, felt fairly sure the white prisoners were the men for whom they were looking. Naturally, Engleman's party was anxious to continue the pursuit, if possible, that night. This, Colorado Bill, after some trouble, succeeded in convincing them would be very foolish.

"I reckon ye hevn't a kerrect idee of the kind of critters ye will find the two men with. They wouldn't hesitate to kill ye, as they hev done many other people, and even if ye air willin' to take such risks fer yerselves, ye must not fergit thet ef ye should make it too hot fer the men, they might turn around and shoot the fellers ye air tryin' to rescue."

Neither Blank nor Petromelinski had taken any part in the conversation between Colorado Bill and his employers; but Blank, turning to Petromelinski, now said:

"I remember your telling me, Ivan, some days ago, that you knew some little about the kind of men who have probably taken the two Gordons prisoners. Suppose we tell these gentlemen all we know about the matter. Would you like us to do this, Professor Engleman?"

"I certainly should, Mr. Blank," was the reply. Blank and Petromelinski then gave a detailed de-

scription of the kind of people they would probably find on the Mesa Verde with the two white men. The description was given by them alternately. One would begin and the other would fill in or supplement the description.

Seeing that Engleman and his party were surprised at the extent of the knowledge they had of the Mesa Verde, Blank added:

"You see, gentlemen, this place is where so many of the men who are wanted in this country and Russia go to hide, that we are obliged to keep posted about it."

From the information thus obtained, it was evident it would be necessary to lay their plans carefully. They must endeavor to obtain the information they wished without being seen by the Danites or their Indians, and this would be difficult; since their scouts and spies were apt to be constantly on the lookout now they knew they were being pursued. They discussed their plans for an hour or more, holding what they very appropriately called "a council of war."

As a result of this meeting, it was agreed that nothing should be done until they could go together to the Mesa Verde. To do this they would be obliged to wait until the murderer Metchiniskoff could be sent on the way to Russia, and the emerald was safely on its way for delivery to the Czar.

"I imagine the first thing you will want to do," said Professor Engleman to Petromelinski, "will be to see that Metchiniskoff is sent on his way to Russia."

"Yes, that's the first thing," replied Petromelinski.

"Will you go with him?" inquired Blank of Petromelinski.

"I go to Russia! By no means," was the reply. "While the other fellow, Mashinsky, is at large, I must remain here and continue the search for him." And then, turning to Blavinski, he said: "I suppose you will be anxious to return the emerald to the Czar?"

"Naturally," said Blavinski. "The emerald, as you know, is very valuable, and I want personally to deliver it to the Czar as soon as I can safely do so."

"Then, of course, you will be willing also to see that Metchiniskoff is delivered up to the authorities in Russia."

"I will be glad to do so," was the reply. "I will go direct to San Francisco, and thence by steamer to Russia. If, when this is done, I find you have not succeeded in taking Mashinsky, I will return and help you."

"Blank," said Petromelinski, turning to his colleague, "I imagine you will remain here and aid me in the search for Mashinsky."

"I must," was the reply. "Mashinsky is now wanted for the theft of diamonds in America as well as for murder in Salt Lake City. I could not think of returning to the East until I have made every effort to capture him."

They were still sitting around the camp-fire when Awake-in-the-Night, approaching, beckoned to Rob and, taking him a short distance apart, remarked:

"You and Smile-on-his-face my friends. Awake-in-

the-Night come back to say the white men with the Indians are your grandfather and father. They have gone to the Mesa Verde," and with that he again disappeared.

It was agreed that Francksen, Fred, and Blank, accompanied by one of the cowboys as a guide, should go early the next morning to the nearest railroad station and take a train for San Francisco; that as soon as Blavinski and the murderer were safely aboard a steamship, bound for Russia, they should return, and that until that was done no steps should be taken for visiting the Mesa Verde.

CHAPTER V

THE FURTHER ADVENTURES OF MASHINSKY

When Metchiniskoff was taken prisoner by Happy, Mashinsky was a short distance behind his partner in guilt, so that he could see all that was happening. He could, therefore, not only see the dreaded Petromelinski and the almost equally dreaded Blank approaching in one direction, but also Rob and Colorado Bill approaching in another. Without making any effort to rescue his companion, he basely fled.

There are so many deep depressions in the surface of the country in which Mashinsky had so unexpectedly met his enemies, that he found it ill adapted to a rapid flight. No matter in what direction he might endeavor to escape, he would soon be stopped by one or another of the side gulleys or canons that abounded. This necessitated frequent change in direction, and was a great handicap to him.

There is a marked difference between an ordinary river flowing through a wide valley and one that flows at the bottom of a deep cañon, where it is shut in by almost perpendicular walls. In the one, the rain water flows, or rather trickles, slowly down the gentle slopes, supplying the life-giving moisture to the plants. Such a river valley, therefore, is covered with rich

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verdure. Moreover, during its gradual flow there is an opportunity for the water to sink deep into the ground, thus filling the reservoirs of springs. It is true that much of these waters finally reach the river channel, but they do this slowly, thus not only affording time to sink into the soil, but giving an abundance of time for the return of some of the moisture to the dry air by evaporation. A river flowing through a valley, therefore, for the most part ensures a rich vegetation and a fairly moist atmosphere.

Not so with the stream that flows sullenly at the bottom of a deep cañon. It blasts rather than blesses the country it drains, and turns it into a desert. The water from the occasional rains disappears almost at once from the surface in a sullen plunge over the walls of the cañons. This flow is too rapid to permit the water to do much in the way of moistening the surface as a whole. The surface is, therefore, left dry and barren. The air over it is so parched that it is not only not friendly to vegetation, but, to a certain extent, makes it difficult for rain to fall.

But, while the country in which Mashinsky found himself did not facilitate flight, it afforded many advantages for hiding. Many of the cañons have sufficiently gentle slopes to enable one with care to find a safe passage to the stream below.

There was another handicap for Mashinsky. To take advantage of these deep gulches he must have no little familiarity with the locality. He had never been

there before, however, so that the chances of his finding a safe path to the stream below were very slim.

Mashinsky was not the only one who had witnessed what was occurring between Metchiniskoff and Happy. There were two separate groups of men who had also been watching. One of these was Joseph Smith, the Mormon, and an Apache Indian. The other group, standing in an adjoining side cañon overlooking the level ground on which Happy and Metchiniskoff stood, also able to see all that was going on, consisted of two Pueblo Indians. Neither of these groups saw the other. Each was too intent on observing the encounter. The Pueblo Indians were shamans, or medicine men, and judging from their headdress they were among the principal men in their tribe.

Both groups were greatly interested in what they were seeing. But we can best understand the nature of their interest by listening to their conversation.

Listen first to Smith, who is talking to the Indian at his side.

"That fellow," he said, pointing to Mashinsky, "will make a good recruit for your fighting men. He has many enemies and they are close on his heels. You can make him help you by threatening to give him up to them unless he does what you ask."

"Man no good," grunted the Indian; "heap bad fellow. Big coward to run away without helping tother fellow. Indian not think much of him."

"That need not trouble you," replied Smith. "You

are not generally so careful about the men you take into your company to help you in stealing and killing. I say this man will make a good recruit."

With a contemptuous grunt, the Indian replied:

"White man will do for Indian, but white man must do what he is told or Indian will make it heap bad for him."

"That's all right," replied Joseph Smith, grimly smiling, "I don't care how you treat him. You can easily get him. Should he trouble you hand him over to his enemies."

Listening now to what the Pueblo Indians were saying, it is evident that the conduct of the Russian Jew filled them with even deeper disgust than it had Joseph Smith and the Apache Indian.

"Man very much coward," said one of them to his companion. "Leave friend and run away."

"But all right lad," replied the other. "Fool that man much," he remarked as they saw Happy throw his pistol up in the air, catch it again, and send a ball through Metchiniskoff's hand. "Heap big warrior. Shoots quick. Aims true. Great lad."

"We capture him and teach him to be a shaman?" It is put as a question. The only reply his companion made was a significant nod of the head, meaning yes.

It is the habit of the medicine men of the Pueblo Indians, and indeed of many other tribes, to adopt young boys, train them in their ways, and so prevent their

ranks from ever dying out. They are, therefore, constantly on the lookout for promising lads, and, although this is seldom done with those of another race, yet, when exceptionally bright white lads are discovered, they do not hesitate to adopt them if they can.

When a lad is thus taken into what constitutes their priesthood, family ties, to a great extent, are broken, the lad being kept for the remainder of his life almost continually in the service and companionship of the shamans.

Were not something of this kind done the line of their priesthood would soon disappear, since the prolonged fasts and rigid discipline practised, almost invariably result in a shortened life. It is necessary, therefore, constantly to recruit their ranks by boys.

It was natural the shamans should be pleased with what they saw. Happy was to them an unusual type of lad. They could see that if properly trained he would soon attain a high rank in their priesthood. They, therefore, determined to take the first opportunity of capturing him and taking him to some one of their villages, where they might initiate him into their mysteries.

"We will watch for the lad and take him prisoner when his friends are away," said one of the Pueblos to his companion.

Mashinsky, as already stated, had reached the conclusion that it was wise to run, and he started rapidly in a direction opposite to that of his approaching ene-

mies. It so happened that he started almost directly toward the side cañon where Joseph Smith and the Apache were standing. He saw the opening to the cañon before he caught sight of the men.

"What a wretched country," he said to himself. "A fellow can't go in a straight line without getting into trouble. If I turn back I will fall in the hands of that devil, Petromelinski, and that other devil, Blank. If I go to the left I will fall into the hands of the other crowd."

As he stood for a moment undecided what to do, he heard a low voice saying:

"If you wish to escape come this way," and looking up he saw Joseph Smith and the Apache standing near him.

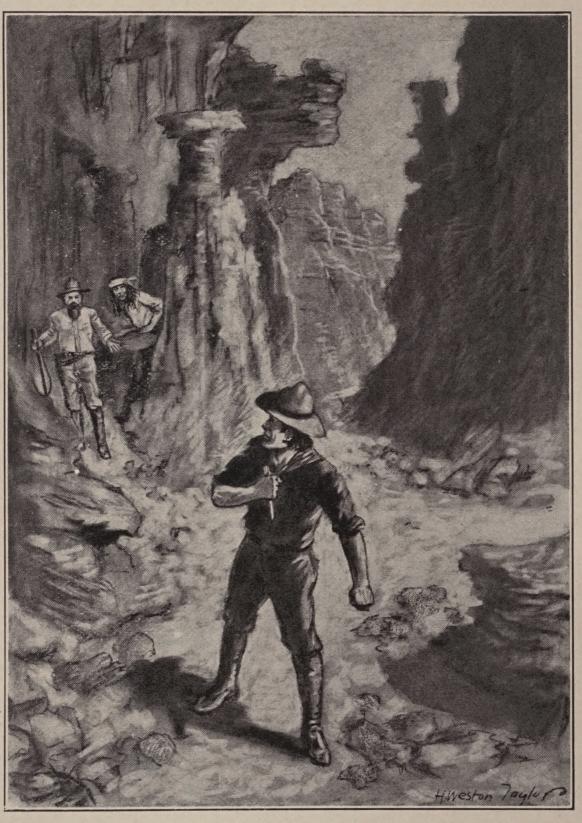
Fearing that he had fallen into an ambuscade, Mashinsky drew his dagger and took on a look that gave to his face a more repulsive appearance than usual, and this is saying very much.

But Smith and the Indian greeted him with a smile, Smith saying in a low tone:

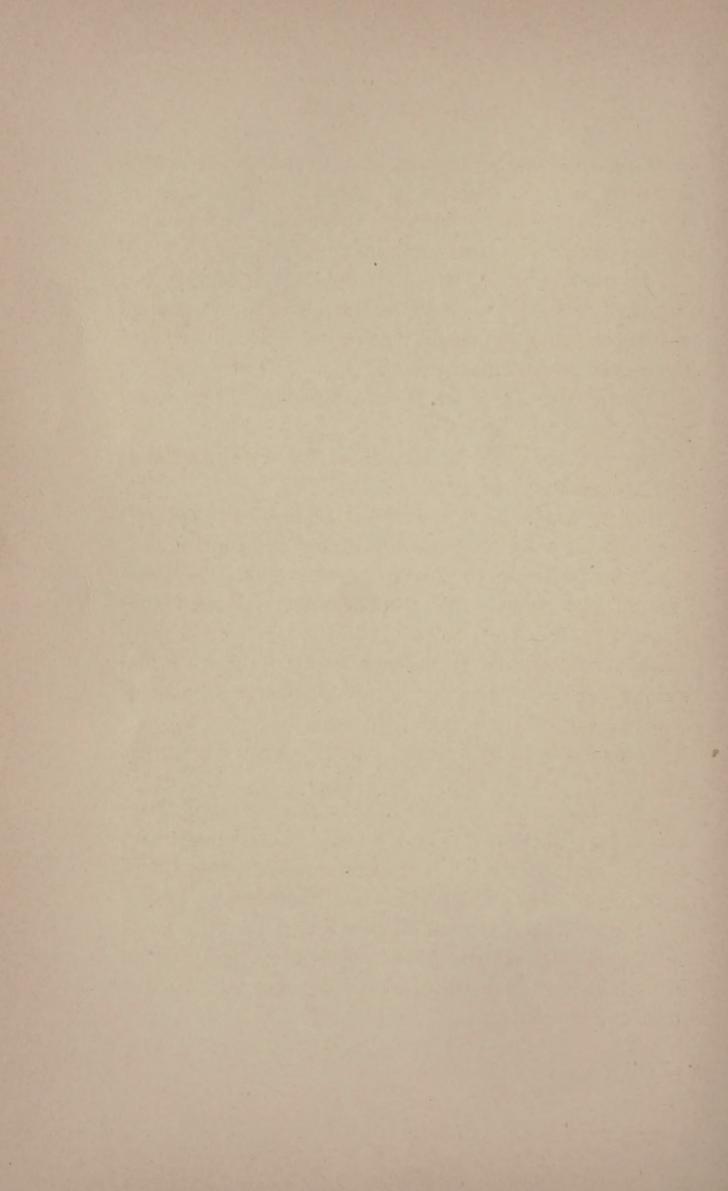
"Have no fear. We are your friends and will help you escape."

Mashinsky had but little choice. If he fled from Smith and the Indian he would certainly be taken by the dreaded Petromelinski and Blank, and if not by them he would probably be shot by Colorado Bill, who looked like a man who was quick on the trigger. He, therefore, approached the Mormon and the Indian.

"Fear not, stranger," said Smith, "you are much



"Mashinsky drew his dagger" Page 70



safer with us than you would be with the men who are pursuing you."

"Who are you?" inquired Mashinsky, still grasp-

ing his dagger in a menacing manner.

"It matters not," was the reply. "It should be sufficient if I tell you that the men who are pursuing you are as much my enemies as they are yours. I hate them even more than you do."

"Then, stranger," replied Mashinsky, "I'm with you."

"Follow us," said Smith, "and we will soon take you to a place of safety."

Glad to escape on any terms, Mashinsky descending the cañon rapidly followed Smith and the Indian, and was soon far below the surface. After some time they entered the main cañon and rapidly followed the stream.

Mashinsky found it difficult to keep up with his guides. After a half-hour he was so nearly exhausted that he said to Smith in a surly tone:

"I cannot go any farther, whether I am caught or not."

"We can safely rest now for a while; I will give you a breathing spell," said Smith. "Of course you know," he continued, "how dangerous it would be to stroll about very much in this neighborhood."

"I know that," replied Mashinsky.

"Then what are you growling about?" said Smith, in such a tone that Mashinsky saw there was no use in his being ugly.

"I don't know, I'm sure," was the reply. "In fact, stranger, I am lucky in meeting you. I could not safely move about much outside of the cañons."

"Do you think your enemies will make any continued efforts to capture you?" inquired Smith.

"Two of them would not hesitate to follow me to the grave. One is a great Russian detective, known as Petromelinski, and the other a Philadelphia detective, known as Blank."

It was evident that Smith had heard of Petromelinski before.

"I have heard of the man you call Petromelinski," he said. "He's a great fellow for catching men like you, and I think you may make up your mind that he is going to take you unless you let us help you. What are you thinking of doing?"

"I don't know," was the reply.

"Would you like steady employment, at least for a while?" continued Smith.

"I would. Can you give me any work?"

"The Indian can," replied Smith.

"What kind of work?" inquired Mashinsky.

"Suppose a part of it was to follow the people who are trying to capture you? How would that suit you?"

"It would suit me all right," replied Mashinsky, with a great oath.

"And if the other work was to follow white mining men or prospectors, who came into our country to pick out the best mineral lands, and drive them out,

or, if necessary, to kill them, how would that suit you?"

"That would suit me all right," was the reply.

"Then I can give you steady work," remarked Smith.

"And how about the pay?" inquired Mashinsky.

"You will find that all right. But make up your mind quickly," he said, assuming a harsh tone; "if you don't like the work I'll show you the way back to the surface, where you can shift for yourself."

"But I do like the work," was the reply; for Mashinsky was beginning to fear the man would do what he threatened.

"Then," said Smith, "follow me," and the three men again set off at a rapid pace in the direction of the Mesa Verde.

All the people at the combined camp-fire of the different parties had turned in for the night, except Happy and Colorado Bill, who sat talking. Bill was greatly mortified that a tenderfoot, like Mashinsky, had been able to escape, almost in sight of his pursuers.

"I feel blamed mean, Hap," he said to the lad, "thet I hevn't been able to follow the tracks of thet Russian feller. I hev been a'most of my life follering tracks, and here's a feller, what I reckon hez hed but little experience in this work, gettin' off from me. It makes me feel cheap like."

"Quit your whinnying, Bill," said Happy in a con-

soling tone. "It shouldn't be so hard for Mashinsky or any other fellow to make his escape in a place where there are so many side cañons in which he could hide."

"How do ye allow the feller got off, Hap?" inquired Bill.

"No one can be sure he did get off, Bill. He may have fallen to the bottom of the deep cañon, where he now lies dead."

"Thet's so," said Bill. "I'm free to admit thet's a sort of consoling to me. But," he continued, "hev ye thought of any other possible way he may hev escaped?"

"I have, Bill," was the reply.

"Then out with it," exclaimed Bill.

"Well," continued Happy, "don't it seem more than likely that he has fallen into the hands of some of the people connected with the Indians we have been following, and that they have shown him a safe way to the main cañon? The chances are that by this time he is hurrying with them on their way to the Mesa Verde."

"What ye tell me, Hap, is more comfortin'," said Bill. "I hope that feller hez not been killed. Not that I care fer him," he added, "but a'cause I would like to say something to him should I see him agin."

"If," continued Happy, "he is still alive, as I think probable, and has gone with some of the party we have been pursuing, the chances are that we will see him again."

CHAPTER VI

THE MESA VERDE

From what Awake-in-the-Night had told him, Rob was now sure his grandfather and father were with the band of Mormons and Indians they had been following. He was therefore no little cast down when the conclusion had been reached of not continuing the pursuit until the return of Colorado Bill, who was to be sent to guide Blavinski and Metchiniskoff to the nearest railroad station, where they would take the train for San Francisco and thence go by steamship to Russia. On reaching Russia, Blavinski contemplated going to St. Petersburg by the overland train from Vladivistok. Although Colorado Bill was to return to them as soon as he had taken Blavinski to the railroad station, yet Rob knew this would necessitate a great delay in their following Smith and his band. It would be at the least five or six days before Colorado Bill could return, and what might not happen to his grandfather and father during this weary waiting.

Seeing Rob's disappointment from his countenance, Professor Engleman, who had been discussing the matter with Mr. Christian, turning to the lad, said:

"It will come hard to wait, Rob, will it not?"

"It will, professor," was the reply; "but doubtless both you and Mr. Christian are satisfied that it is wise

to take this course. You see," he said, "if we do not keep on the track of the Mormons and Indians they may so cover their traces that it will be impossible for us to find them again."

"That is what Mr. Christian and I have just been talking about, Rob. We are by no means satisfied with the conclusion that has been reached. I don't believe the others have turned in for the night. Suppose you ask them to come again to the camp-fire? Say we wish to talk over this matter further with them."

It is needless to say that Rob did this willingly. In a short time all the members of the party were again seated in consultation around the camp-fire.

"I have asked you to meet again, gentlemen," said Engelman, "because Christian and I, on thinking the matter over, have been wondering whether we have not made a mistake when we decided to wait before resuming the pursuit until the return of Bill."

"There, Ivan," said Blank, turning to the Russian detective, "you see these gentlemen have reached the same conclusion we have."

"And what was that conclusion, Mr. Blank, if I may ask?" inquired Christian.

"That it would be better," said Petromelinski, answering for Blank, "to follow these people without delay now we are on their tracks. Blavinski," he said, turning to that gentleman, "you brought a reliable guide with you, did you not? Do you think he is a man you can trust?"

"I did," said Blavinski. "I feel sure both he and

the man engaged to look after the horses can be trusted. They are both true white men."

"Do you think," continued Petromelinski, "that, if instead of sending Colorado Bill to guide you to the railroad station, you took these two men, there would be any increased danger of losing either the prisoner or the emerald?"

"I don't believe there would be any extra risk," was the reply, "though perhaps you had better let me have Fred Loosing also. Then I think it will be perfectly safe."

"I should be very unhappy," said Engleman, "if doing this on my account, anything should occur whereby Metchiniskoff makes his escape, or the emerald again be stolen."

Don't worry about Metchiniskoff escaping," said Blavinski. "We would be justified in shooting him if he attempts it. You think it would be safe, do you not, Ivan?" he added, turning to the Russian detective.

"Perfectly," was the reply. "If I did not I would never be willing to take the responsibility of going with our friends in the pursuit. But, professor," he added, turning to Engleman, "I am not doing this solely on your account. Although much pleased to aid in the rescue of your friends, I am unwilling to let that fellow Mashinsky escape."

"I am greatly pleased that you feel that way about the matter," said Engleman.

"Then I will do as you suggest," said Blavinski to Petromelinski. "Have you any advice for me?"

"Yes," was the reply. "Go to the nearest large town and ask the sheriff to raise a posse to accompany you by train to San Francisco. I will give you a letter to the authorities of San Francisco, with whom I am acquainted, so that you will have no trouble in obtaining extradition papers to take the fellow out of the country. I have already prepared such a letter, believing you might need it."

Blavinski and his party started early the next morning and the others again took up the pursuit.

They were then in the northeastern corner of Arizona, where the boundaries of Colorado and New Mexico meet its line and that of Utah. It was a wild district, containing some of the tributaries of the great Colorado River. Like all the country in the neighborhood, it was a region of deep gorges, the drainage reaching the Colorado at the bottom of deep cañons.

The Rio San Juan, the principal eastern tributary of the Colorado River, south of the confluence of the Grand and the Green Rivers, flows west near, and generally parallel to, the southeastern boundary of Utah, emptying into the Colorado River north of the center of the northern boundary of Arizona. The San Juan rises in southwestern New Mexico, when, turning to the northwest, it passes almost exactly through the point where Colorado, New Mexico, Arizona, and Utah meet.

The eastern tributaries of the San Juan from Colorado are interesting, from the fact that one of them, the

Rio Mancos, while flowing through the State, passes through the Mesa Verde. The Ute Indian Reservation extends into this part of Colorado, although the greater portion lies to the south in New Mexico.

Our friends were, therefore, not far from that curious corner of the great Southwest, where parts of Colorado, Utah, Arizona, and New Mexico come together at a single point.

We have so often referred generally to the Mesa Verde, that it will be well to give a brief description of its physical features and general peculiarities.

The Mesa Verde, or as will be understood from the word verde, the green mesa, is an irregularly shaped tableland in the southwestern part of Colorado, that covers an area of something like seven hundred square miles. Unlike the general surface of the surrounding country, the Mesa Verde is covered for the greater part with a growth of pine and cedar trees, with here and there an occasional spruce, especially in or along the walls of the cañons, where the moisture is less scanty. These trees give to the mesa the green appearance that warrants its name.

As is well known, the name mesa (pronounced may'-ze) is commonly given in the Southwest to any extended, isolated tableland, with a flat surface, that stands alone, or almost alone, in a fairly level plain. A mesa generally has almost vertical walls that render access difficult; indeed, in some cases, almost impracticable. When more limited in extent, the mesa forms

what is generally called a butte; the two formations, however, are similar.

It may be interesting to note here that mesa is a Spanish word for "table," while butte is a French word for a target or a mark.

A mesa was no new sight to Robert and his boy friends. They had already seen a number while passing through Arizona in pursuit of the Mormons. Both Professor Engleman and Mr. Christian had called especial attention to these formations. It seemed odd, when the boys first learned that probably many hundreds of thousands of years ago the surrounding country had the same general level as the tops of the mesas, or tablelands; that all the surrounding land had been gradually carried away, leaving the mesas, or buttes, standing like sentinels overlooking the surfaces that had so long ago disappeared.

"Is it known, Mr. Christian," inquired Robert, "why the land of the mesas and buttes has not been carried away like that surrounding it?"

Seeing that Happy wished to say something, Mr. Christian, turning to the lad, said:

"Can you tell Robert why it was, Happy?"

"Not exactly," was the reply; "but I think it must have been because the land of the mesa was harder than the rest, though why harder I don't know. Is it known, sir," continued Happy, "what made it so?"

"Perhaps not exactly, my lad," was the reply. "It is, however, almost certain," he continued, "that in

most cases the land of the mesa has been made harder by dykes of basalt, which, as you probably remember, have been formed by the cooling of molten rock that has been forced up from below and hardened."

"I remember now," said Robert, "reading in a geology that the buttes, or smaller mesas, often consist of the hardened cores or plugs of lava that once filled the crater and tube of the many volcanoes that existed in this part of the country long ago. Is that right, sir?"

"Yes," was the reply; "that is correct. This hardened core could better resist erosion than the surrounding rock, and would therefore remain higher than the surrounding plain."

As our party subsequently had many opportunities for observing, the Mesa Verde, though generally level on the surface, was so much cut up by side gullies, or cañons, and possessed such irregular outlines, that it is practically impossible to pursue anything like a straight course over the surface for any great distance. Although it is true in the case of the side cañons of the Rio Mancos that ran through the mesa, they were generally parallel, yet in many places one would find himself on what would almost correspond to a very irregularly shaped island, from which it was impossible to pass to the adjoining island, except at a single narrow neck connecting the two. In any other direction he would be stopped by the more or less impassable walls either of the main or one of the side cañons.

The upper strata of the rocks of which the Mesa

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Verde is composed, consists, for the greater part, of massive sandstones; the middle strata, of alternating sandstones and shales; and the lower strata of sandstones. Many of the shales are quite soft. When the softer beds are exposed to erosion, as the harder rocks are undermined they break down into vertical cliffs. When the hard and soft beds alternate at short distances a series of steps with intervening slopes are formed.

For considerable distances over the Mesa Verde the strata are to a certain extent held together by almost vertical dykes of basalt. Over many parts of the surface the eroding waters had cut deep cañons, the streams often flowing several thousand feet below the surface. In some places the walls of the cañons were almost vertical. In many places the vertical walls were marked by places where the softer material had been eroded so as to form huge caves. In such cases the harder strata projected above, forming a huge roof for the cave below. When the walls of the cañons were observed from below, the alternate harder and softer strata could be clearly seen outlined in well-marked horizontal layers. (See Appendix A, "Mesa Verde.")

There is abundant evidence that, long ago, the Mesa Verde had supported a dense population; for, on the vertical walls of the higher cañons, especially on those of the cañons of the Rio Mancos, there are numerous cave dwellings either more or less isolated from one another, or collected in rows often of a dozen or more at the least. In some places extended caves are found

in the softer rock between the parallel strata, on the floors of which are found ruins of large villages.

Most all these dwellings are found on the almost inaccessible walls of the deep cañons. These deserted dwellings of an ancient race vary from rude rooms, dug out of the softer rocks, to more elaborate structures consisting of well-constructed houses, sometimes three or four stories in height, built of blocks of stone that had been carefully hewn, chiseled, or cut, apparently with the primitive stone axes that are found in great numbers in the deserted houses.

From the manner in which these houses were built, as well as from their location, there can be no doubt that they were fortified dwellings, erected by a race that has long since disappeared, as a protection from enemies, who were probably not unlike the savage Apaches who live in the neighborhood and at times continue both to murder and pillage.

While most of the cliff dwellings have long ago been abandoned, some of the best preserved are still used as occasional dwelling-places for white outlaws, horse thieves, or some of the Indian descendants of the former races, such as the Navajos, the Utes, the Pueblos, and many others.

Archeologists, or those who study the remains, places, customs, and records of ancient people, whether historic or prehistoric, have given much attention to the cliff dwellings of the great Southwest, especially to those of the Mesa Verde. Those who are desirous of becoming acquainted with what is known concerning

the archeology of the Mesa Verde are referred to the great work by G. Nordenskiold, called the "Cliff Dwellers of the Mesa Verde."

For the sake of those who do not care to go much further into the matter, it is sufficient to say that careful archeological studies have established the fact that in various parts of the Mesa Verde, especially along the high walls of the cañons of the Mancos River, that have been examined for a distance of about thirty miles, have been found fortified cities of fairly considerable extent, with well-built vertical towers, in some cases consisting of three concentric circular walls, formed of well-dressed, massive stonework. In some cases these cities were situated on the parts of the precipitous walls where they were practically inaccessible to their enemies, and were supplied with springs of good water. Doubtless it was into these fortified villages that the people of the land retired on the approach of their enemies. It is improbable, however, that they were intended for long-continued occupancy, since the small pieces of arable land they cultivated for the raising of maize or Indian corn, their principal vegetable food, were situated far away in the lowlands.

Although exceedingly superstitious, the early cliff dwellers apparently possessed no little mental ability for a semi-civilized race. They were deeply religious, believing in the existence of deities not unlike those of some of the present Indian tribes they called "The Trues." The worship of these deities in the present Indian tribes was placed in the hands of medicine men,

known as "shamans" among the Pueblos, and by other names among the other tribes. The circle appears to be the symbol of perfection with them. Most of their religious ceremonies were conducted in the dark in a circular-shaped room or building called an estufa, lighted only by a fire they endeavored to keep continually burning. The estufa was either entered by means of a ladder extending down from the middle of the roof, or by a passage sometimes twenty feet in length, through the entire distance of which one was compelled to crawl.

CHAPTER VII

THE CLIFF VILLAGE ON THE RIO MANCOS

Nothing prevented our friends from again taking up the pursuit early next morning under the guidance of Colorado Bill. Although an excellent scout, he had great trouble in tracing the tracks of Joseph Smith's party, and before long even these faint traces entirely disappeared, and he was considerably mortified at his inability to follow the fugitives.

"Hap," he said to his young friend, "these fellows know the country so tarnation well that they kin fool any one tryin' to prance arter them. They kin even gallop along the bottom of the cañons where naterally a feller kain't find them."

"If that is so, Bill, and Awake-in-the-Night has told the truth when he said they had gone to the Mesa Verde, why not go straight for the mesa? You believe Awake-in-the-Night has told the truth, do you not?"

"In course I do."

"Then don't you think it would be best to do as I suggest?"

"Thet be a good idee, Hap," replied Bill. "Let's see what the gentlemen say about it."

Calling the men together, Bill said:

"Gentlemen, I'm free to tell ye I hev lost the tracks of these fellers. Hap here asks me if it wouldn't be

best to go direct to thet thar mesa the Injun says they be bound fer. As fer me, I agree with Hap. What do ye say?"

After a brief consultation it was agreed to make for the Mesa Verde, not directly, but to go first to the mining town of Durango, Colo., where they could make inquiries among the miners as to whether a party of Mormons and Indians had recently been seen anywhere in the neighborhood.

Durango, the capital of La Platte County, Colo., is situated about forty miles south of Silverton, at the intersection of the Denver & Rio Grande and the Rio Grande & Southern Railroads. There are coal mines in the neighborhood, and since this part of the State has also many valuable mines of gold, silver, iron, and copper, there are many smelters, etc. The town is situated about sixty-eight miles east-northeast of the extreme southwestern corner of the State.

When they reached Durango they were fortunate in finding several prospectors who had come in from the southwest. These men reported having seen a band of Mormons and Indians in a portion of the Mesa Verde through which flows the Rio Mancos, a tributary of the San Juan. They had a glimpse of two white men in company with the Indians and had tried to talk with them, but the Indians prevented any conversation by hurrying off with the white men.

On leaving Durango they reached the Mesa Verde at some little distance from the headwaters of the Rio Mancos, working their way down this stream toward

its discharge into the San Juan. Their progress was necessarily slow by reason of their ignorance of the character of the country, as well as by the dense vegetation that covered some portions. It was a region Colorado Bill had never before visited; however, he guided them well, though it was frequently necessary to retrace their steps to avoid impassable cañons. They were men who were not readily turned back by difficulties, so they kept on, following at times the banks of the streams in the cañons, and at times moving over the irregular land near the top of the mesa.

One day, while on their way down the Mancos, they reached a point where they saw something that greatly surprised them. Engleman, Christian, Happy, Rob, and Colorado Bill were together. They had been slowly forcing a passage through a dense tangle of scrub oak, and had reached a grove of spruce trees growing closely together. They were going cautiously because this was a district in which at any moment they might reach the precipitous walls of a deep cañon, and this they knew from experience was especially apt to occur in regions where the better soil and the moister air from the cañons permitted a more vigorous vegetable growth.

As was common in such cases, the members of the party were at irregular distances apart. Colorado Bill and Happy were leading, followed at some distance by Engleman and Christian, and finally by Rob and Norman. Bill came to a sudden standstill and exclaimed:

[&]quot;Well, I'll be jiggered."

Happy smiled at the guide's expression, as he said: "What has struck you, Bill?"

"Touch me, Hap. I wanter know whether I'm awake or asleep."

"What's hobbling you?" inquired Happy.

"Look fer yerself," replied Bill, pointing across the opposite side of the cañon, which was in the neighborhood of about a mile from where they were standing. "Then ef ye wanter ask me what hobbles me I'll try ter tell ye."

Happy saw something that surprised him even more than it had Bill. There, in the full sunshine, on the other side of the cañon, were ruins of so wonderful a character that, like Bill, Happy began to wonder whether he had not fallen asleep, and if what he saw was not merely a dream; for there could be seen the ruins, not of a single cliff house, nor even of a row of houses, but of what at one time had evidently been a large and populous village. Moreover, it had evidently been a fortified village, for at either end were the ruins of towers of dressed stones well fitted together. The spaces between the towers were occupied by groups of houses of two, three, and four stories. All the windows were comparatively small, as if to render it difficult for enemies to enter through them.

By this time Engleman and Christian had reached them.

"What surprises you?" they asked as they approached Bill and Happy and saw the expression of their faces.

Happy said nothing, but merely pointed across the cañon to the extensive ruins.

"I do not wonder you are surprised," remarked Christian. "Joe," he said, turning to Engleman, "what do you think of that? Is it not wonderful?"

"It seems almost incredible, John," replied Engleman. "It is clearly the ruins of a fortified village, deserted many generations ago by the people who built it. Did you know there were such ruins in this locality?"

"I have an indistinct recollection of reading about this place," said Christian. "I think it is one of a number of ruins that were discovered by one of the Wetherils, a family of white people who have a ranch in the lower lands of the Colorado south of the Mesa Verde. In December, 1888, while searching for stray cattle, one of them discovered the ruins of a remarkable fortified village. They had been working their way through a dense thicket of scrub oak. When they reached the edge of a steep cañon, near a grove of sturdy spruce trees, such as we find here to-day, they saw the ruins of the village on the opposite side of the cañon. There are several other similar ruins in this part of the Mancos Valley, one of which is called the Cliff Palace; but whether it is the 'Cliff Palace' or the 'Spruce Tree House' we are looking at, I do not know."

"How did the people who lived in that village reach their houses?" inquired Rob, who was now standing near them.

"Possibly from below, Rob," replied Engleman.

"Although the buildings have been erected on narrow horizontal ledges, on the sides of walls that are almost perpendicular for many hundreds of feet, yet, as you can see, there are inclined spaces below where it might be possible to find paths to the foot of the precipice. From this point they might enter the houses by lowering ladders made of tough fibers. When these ladders were drawn up the people in the village would be safe from their enemies."

"It doesn't look as if the houses could be approached from above, Uncle Joseph," said Norman. "They are so far below the top of the mesa. One could never get down the steep walls above the houses, and even if they did," he added, "the overhanging rock projects so far beyond the precipice on which the houses are built that they could never reach the place from above."

Happy, who had been listening closely to what Norman had said, turning to the professor, remarked:

"But they may have got in from above for all that, may they not?"

"What makes you think so?" inquired Professor Engleman.

"Look at the big cave back of the houses. It evidently extends some distance into the soft rock. I was thinking that possibly there might be a passageway through the cave to the city from above."

"I kain't say whether ye be right or not, Hap," replied Colorado Bill, grinning, "but I reckon it be very likely. I hev heerd of sich things being done in other

places. But I am free to confess I hev never seen any place ez big ez what lies over thar on the other side of the cañon."

"Of course there are no people living in those ruined houses now," remarked Norman.

"I'm not so sure of that," said Happy.

"Why do you say that?" inquired Mr. Christian, who knew the boy was not apt to make such an assertion unless he had some reason for doing so.

"Because," replied Happy, "I see smoke coming from the ruins."

"Where, Happy?" inquired both Engleman and Christian eagerly.

"Between the foot of the ruined tower and the wall of the precipice. Can't you see it, Bill?"

"Yes," said Bill with a grin, "I kin see smoke coming from the identical place Hap hez pinted out."

It was some time before either Mr. Engleman or Mr. Christian could see the smoke; but at last, by the use of field-glasses, they were able to distinguish it.

"Do you think there are any people over there, Joe?" inquired Christian.

"I imagine that there must be a fire to produce smoke, although, of course, the fire might be of chemical origin, or it may be caused by the earth's interior heat; for, as you know, John, this is a region of extinct volcanoes. But I don't believe it is due to either of these causes. Can either of you see any people around the ruins?"

"I kain't see any," remarked Bill.

"Nor can I," said Happy.

Happy then began examining the ruins with his glasses, as did also Mr. Christian and Professor Engleman. Although they could see the smoke more distinctly, yet no sign of life could be seen.

"No wonder we did not see the smoke easily, Joe," said Mr. Christian. "It is a very small fire that is causing it. I am almost disposed to think it is the smoke from a number of cigarettes or pipes. I doubt whether we could see it at all were it not for the black background of the cave."

"The cave seems to extend far back into the cliff," remarked the professor.

Naturally the question arose as to whether they should take time to examine the ruins. There was a possibility of people being there, from the presence of the smoke. Might it not be the people they had been following who occasionally used it for a dwelling?

"We should make an examination of that place, John," said Engleman, "first from above, and afterward from below. But here come Petromelinski and Blank, Francksen and the others. Let us see what they would advise."

In a few moments they joined them. Their astonishment was equal to that of the others. Both Petromelinski and Blank at once called attention to the smoke issuing from the ground near the tower. They were close observers, as their calling necessitated.

"Looks as if some one was over there, Ivan," said Blank, turning to his friend.

"It does," was the reply; "but that is not wonderful. I understand that ruins in this district are often used by prospectors, cowpunchers, cattle thieves, or outlaws."

"Do you think it worth our while to try to examine the ruins, Blank?" inquired Engleman.

"Of course I think it worth our while to examine the ruins," was the reply. "We are looking for a lot of fellows who are almost sure to be living in some such out-of-the-way place. It appears to be hard enough to get at, and is large enough to shelter them, no matter how big a crowd they may get together. I say, therefore, of course it is worth our while to examine the ruins. What do you say, Ivan?" he added.

"I agree with you," was the reply. "We have information from Awake-in-the-Night that the people we are looking for are in the Mesa Verde. Well, we're in the Mesa Verde now, are we not? And we have been told that they are in deserted cliff dwellings. Well, here are the deserted dwellings all right. It is not likely that these people would take the trouble to build houses for themselves. They are more likely to use those already built. Don't you think so?" he asked Blank.

"Of course I think so," was the reply. "And it is just such a place as the one we are looking at that they are likely to use. So we must examine it, and we must do so carefully. Unless we can surprise them they may again escape."

After consultation they determined to make a careful

examination of the cliff dwelling, at the same time leaving two of their companions to lie quietly on the ground in the grove of trees, and closely watch the place and its neighborhood. Happy and Petromelinski were selected to do this, while the others, led by Colorado Bill, left to examine first the cañon immediately below the cliff dwellings and afterward the mesa above.

The man and the lad lay under the spruce trees watching the ruins for several hours. At last, Happy, turning to his companion, said:

"I hear footsteps. I don't think they are the steps of any of our party."

"I agree with you, my lad. We will lie still and wait," said Petromelinski.

The footsteps approached, and soon Awake-in-the-Night came to where they were lying and at once threw himself on the ground, as if he feared he might be observed by some one in the cliff houses.

Without waiting for either of them to speak, Awake-in-the-Night turned to Happy and said:

"Indian great friend of Smile-on-his-Face. Come to say that the white men you are looking for are with Mormons and Indians over there," pointing to the ruins. "Awake-in-the-Night will show Smile-on-his-Face and his friends how to reach them."

"Will you go with us, Awake-in-the-Night?" inquired Happy.

"Awake-in-the-Night heap big Indian," said Petromelinski, in an effort to reach the man's vanity. "White man's guide, Bill, good, but not so good as

Awake-in-the-Night. If Awake-in-the-Night go with us we'll find the place."

"Awake-in-the-Night will not go with white men now," said the Indian in a decided tone. "Best not to let Indians know he is leading the men who are pursuing them. Indian of more use to his white friends if he stays with the others for a while. But I will show your friends the way to the ruins."

"Where are the white men kept?" inquired Petromelinski.

"Two white men kept in room in tower house," he said, pointing to where Happy had seen the smoke issuing.

Happy told Awake-in-the-Night what his companions were endeavoring to do.

"Then Awake-in-the-Night will wait until white men return," he said.

The three men remained on the watch for many hours, when the quick ear of the Indian heard them coming. Turning to Happy, he said:

"Friends of Smile-on-his-Face coming."

There were great rejoicings when the others saw Awake-in-the-Night, who cautioned them from coming up to the side of the cañon.

"People over there may see you," he said.

When they learned that Awake-in-the-Night was ready to show them how the houses could be entered, both from above and below, it was agreed that Happy and Petromelinski should continue watching while the others went off with Awake-in-the-Night.

Happy and Petromelinski remained on watch for several hours. At last, as they both grew very thirsty, Petromelinski said to his companion:

"Wait for me here, Happy. I'll go and fill my water-bottle at a spring I noticed half a mile from here. Give me your bottle and I'll fill it also."

Petromelinski returned in less than half an hour, but no traces were to be seen of Happy. He had disappeared. The ground near the place where he had been lying had been trampled in a very curious manner, as if there had been a struggle.

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CHAPTER VIII

HAPPY CAPTURED BY THE PUEBLO SHAMANS

Before explaining what had happened during the absence of Petromelinski, it will be necessary to describe in detail an incident apparently unimportant in itself, but which, when connected with subsequent events, exerted a considerable influence on the fortunes of our young friend.

Like all active, growing boys, Happy found it difficult to remain idle while keeping watch with Petromelinski. The two watchers could talk freely with each other, and even move around a little, provided they did not permit their bodies to extend far above the ground.

Much of the time was spent in conversing, Petromelinski giving Happy accounts of some of his most important cases in Russia. He found it pleasant to talk to the lad, who was a good listener and bright enough to take in all he heard. Naturally, the conversation drifted from Russia to Colorado and its curious population of Indians, Mormons, and the cosmopolitan character of its mining towns and districts. He especially spoke about the kind of people who probably composed the fugitives. At last the conversation ceased, and Happy was left to his own devices to pass away the time. This he did in various ways.

After half an hour, Happy took from one of the pockets of his coat a few well-worn leaves of an elementary book, intended for teaching the English language. Selecting a leaf that was covered with the letters of the alphabet, he took out his penknife and, placing the leaf on a flat stone, commenced cutting out little pieces of paper containing one letter each. They were small letters, so that when thus cut out they formed, approximately, half-inch squares.

I imagine I can hear some of my older readers objecting to this incident as exceedingly improbable.

"Why," they ask, "should a bright boy like Happy be monkeying in this way with the English alphabet?"

I acknowledge that such a thought might easily arise in the mind of one not well acquainted with the peculiarities of boys, especially bright boys; but one who is willing to hazard any opinion, based on the assumption that all boys are practically alike, will most certainly be apt to err. It was not only natural that Happy should have such material in his pocket, but also that he should take the trouble to cut them out separately as he had been doing, as the following explanation will show.

A warm friendship had sprung up between Bill and the young lad he had instructed in shooting and riding while on the Texas ranch. This friendship had so increased that the two were frequently together. Bill was proud not only of the ability of Happy to shoot and ride, but especially of the strides he had made

mentally. Though delighted when Happy talked with him in the dialect of the cowboys of the Southwest, Bill especially liked to hear the lad using what he called "pooty" talk.

Nor is it surprising that Bill began to hunger after an education for himself. He often found himself wondering whether it would not be possible for a bright boy like Happy to teach him to read and write.

One day, while in the Colorado Desert, Bill said:

"I reckon, Hap, ye hev no trouble in readin' print or in writin' on paper."

"What makes you trot out that question, Bill?" inquired the lad.

"I was a wondering," was the reply, "whether there'd be a chance fer an old mount like me to larn how to do sich things?"

"I am sure I could teach you to read and write if you are willing to canter hard enough."

"And will ye larn me how to read and write, Hap?" inquired Bill eagerly.

"Cert," was the reply. "Glad to do it. I will try to get a book containing the letters of the alphabet and some simple words at the first large town we pass through."

"I hev done that already, Hap," exclaimed Bill with a bashful smile, drawing out of his pocket and handing to the lad a primer he had obtained.

It was well thumbed and worn. Bill had evidently spent much time in puzzling over its contents when he

could do so without being seen; for he was proud and unwilling to let others discover his ignorance.

"Been at it already, Bill?" inquired Happy, smi-

ling. "How far did you get?"

"Couldn't make head or tail out of the bloomin' layout," was the reply. "Could onderstand the picters, but not what the marks under them meant."

Happy gladly undertook to teach Bill. Under his instruction his pupil had already learned the letters of the alphabet, and could even spell familiar words. To aid in doing this, Happy had adopted the plan of having Bill spell a word, pick out the letters required to represent it, place them in their proper order, and then copy them down on a sheet of paper. In this way he combined instruction in the alphabet with spelling and writing.

When Petromelinski saw what the lad was doing, he inquired with surprise:

"What are you up to, my lad? I know you are not studying the alphabet again. I imagine that you are planning to play some trick with the letters you have cut out?"

"Please do not ask me to say either yes or no," was the reply. Unwilling to give Bill away, he did not volunteer any further information, but went on cutting out the letters until he had quite a number together, when he carefully placed them in the righthand pocket of his coat.

"Hello," he said, rather to himself, as he slipped them in place, "the sewing in the seam of this pocket

is beginning to rip. I'll have to fix it when I again reach my pack and get a thread and needle, or I'll be losing things."

After an additional wait of half an hour they began to grow thirsty, all the water in their bottles having

been consumed.

It was at this time, as recounted, that Petromelinski had gone to fill their water-bottles. He had not been gone longer than five minutes when Happy was surprised by hearing light footsteps back of him. Before he could turn and draw his revolver his hands were held firmly by two Pueblo Indians. They were splendidly built men, and looked with smiling faces at the lad. One of them said in fairly good English:

"White lad has no reason to fear. Indian medicine men his friends. Will take him away to where they live and make medicine man of him."

The other Indian also assured Happy that he had no reason for being afraid.

It must not be supposed that the lad willingly submitted to what had happened. As was but natural, he struggled to escape, but unsuccessfully, for both Indians were strong men. He then began thinking how he could best leave tracks by which his friends could follow his captors. He was certain that on the return of Petromelinski, which in all probability would be shortly, Bill and the rest of his friends would be told of his disappearance, and that efforts would then be made to free him. While he was struggling with them

he thought of a plan, and made a number of plain tracks in the direction in which the men were hurrying off with him. He then began to think how he might leave traces all along the road. From what he had heard about the shamans, he knew that they possessed an intelligence considerably in excess of almost any of the other Indians, so that, unless he was careful in any plan for leaving traces, they would discover what he was trying to do and prevent it.

Just as he was being dragged away from the edge of the precipice where he had been with Petromelinski, he saw lying on the ground, almost covered by the soil that had been disturbed during the struggle, one of the letters as a piece of good luck.

The sight of the letter gave him a splendid idea, and in accordance with his custom he began rapidly to consider the many directions in which he could regard the letter as a piece of good luck. As was natural to him, he began to smile, and this smile continually changed as he began to think carefully over the manner in which he would use the letter.

"If I could only get my right hand free so as to slip it in the pocket of my coat I could let the letters drop, one after another. I am sure Bill would have no difficulty in following me, as I am sure he will try to do. He'll know just what these letters mean, and will know that I have left them; for he will recognize the letters he has used in his studies. He will certainly know how to use them."

The Indians, who had been closely watching the lad,

were both surprised and pleased at the smiles that played upon his face. To them these smiles displayed great bravery. They had made no mistake in their selection. Here was a lad who, instead of bemoaning his capture, was actually smiling. It was personal bravery of a high type, and this was something they greatly esteemed.

They therefore began talking to each other in the Pueblo language, which of course Happy could not understand; and then, as if wishing to assure the lad he had nothing to fear, said:

"White lad should be glad he can learn to be a shaman. Many Indian lads want to be shamans, but not bright enough. White lad all right."

They then began to tell him that their gods, "The Trues," had commanded them to look for a white lad they would find in this part of the country and take him to where they lived in the south, adopt him into their tribe, and make him one of their medicine men.

When he saw that his captors were disposed to be pleasant Happy concluded to be pleasant himself, and in this way try to win their confidence. He therefore turned to the shaman who first spoke, and who was evidently of higher rank than the other, and inquired:

"Will it take me long to learn to be a shaman?"

"Heap long," was the reply. "Much to learn. But not so long for white lad as for Indian lad."

He then asked after a few moments:

"What does a shaman do?"

The men, pleased that the lad was becoming in-

terested, entered into a long description of the great influence the shamans had in their tribes, and the many wonderful things The Trues gave them power to perform.

After they had spoken to him for about ten minutes, Happy said:

"You are holding my arms so tight you hurt them. You are not afraid to free them, are you?"

The Indians laughed at the thought of being afraid of so young a lad, and at once freed both arms, at the same time saying gravely:

"White lad must not try to run away or Indians will kill him with their rifles."

But Happy had gained what he wished. Instead of attempting to escape, he put his right hand into the pocket of his coat that contained the cut letters, and slipping a finger through the weak point in the seam of the pocket, he let one of the letters fall through the opening. Since the lining had not been fastened to the bottom of the coat, he knew the letter would gradually work its way down and reach the ground without, he hoped, being seen by the shamans. was the only uncertain thing about his plan. Would they see the letter fall? It is true it was small, but they were men who were accustomed to see what was going on around them. He therefore anxiously waited to see if they had detected him. Fortunately, they did not. At intervals of four or five minutes he let one after another fall out of his coat pocket.

It was indeed strange that observant men like the

shamans had not noticed what the lad was doing. But they were so intent on talking to him and watching his face that they failed to see the occasional letter as it dropped to the ground. Probably another reason was that, during the daylight in order to reduce the chances of the paper being observed, Happy carefully rolled each letter loosely so as to make it into a pellet.

His captors proceeded at a rapid rate without pausing. They were especially pleased to find the lad was able to follow them without showing any signs of exhaustion. During all this journey they had continued talking with him in a friendly tone, in order the better to gain his confidence.

It was evident to Happy that his captors, although intelligent men, were exceedingly superstitious. From what they told him, it was clear that the inanimate objects they passed were regarded as possessing life. To them the wind, according to its varying sounds, was either the whispering speech of their gods or the voices of evil spirits sent to harass them. The stars were the eyes of their gods looking down on them from above. They appeared to live, as it were, in an imaginary world peopled with many imaginary beings.

At several places they came across objects before which they always stopped a few moments, apparently praying to their gods. These objects consisted of twigs stuck into the ground. At the top of the twigs a plume of bright-colored feathers had been fixed, such as the feathers of parrots, that Happy learned afterward were

brought for this purpose from Mexico. The brighter the colors the more highly did they prize them, since such feathers constituted what they called "good medicine."

At first Happy had much difficulty in understanding what made his captors treat the nodding plumes with such respect. At last the Indians succeeded in explaining to him that when they prayed to The Trues above, the spirits in the feathers heard them, and that when the wind afterward shook the feathers, the spirits repeated their prayers; that they, therefore, had a better chance of being heard, since the feathers would go on praying for them for days and weeks after they had gone by.

"The feathers," said Happy to himself, "are like the prayer wheels I remember reading about as being used by the Brahmins in India. They write long prayers on slips of paper and place them inside a hollow wheel, shaped something like a squirrel cage, and believe that every time the wheel is turned around all the prayers on the papers are sent aloft to their gods."

It was about three in the afternoon when Happy had been hurried by his captors from the side of the cañon toward the south. Night was approaching and the stars were coming out, but his captors did not slacken their speed until near midnight.

During all this journey Happy had not failed to carefully note the direction in which he was being taken. He did this by the sun and other objects during daylight, and by the stars during the night.

It is needless to say that Happy did not fail to liberate occasionally a letter from his pocket, only at night it was not necessary to crumble them into a small space, or to make occasionally a deep imprint of his feet in the right direction by pretending to stumble.

It was about half an hour before midnight when the Indians stopped. Offering the lad some parched corn to eat and bringing him a drink of water from a spring in the neighborhood, one said, pointing to the ground:

"White lad sleep till morning, then shamans go with him to their home."

"Is it far from here?" inquired Happy.

"No," was the reply. "Reach it when the sun is there," pointing immediately overhead.

Happy was so tired by the long journey that, although he had fully intended to remain awake in the hope that he might make his escape, he soon fell into a sound sleep from which he was awakened when the sun was just appearing above the horizon. After a hurried breakfast and a drink from the spring, they again took up their journey, and shortly before noon reached a Pueblo settlement on the top of a high butte.

The arrival of two of their principal shamans with a white captive caused no little excitement among the people, but they were satisfied when informed that the white lad was to be adopted into the tribe and taught to be a shaman.

Turning to Happy, the Indian guide said:

"Come with us. We will take you to our holy place where the other shamans are."

The place referred to was an estufa. It consisted of a dome-shaped underground room, approached from above by means of a ladder. The Indians cautioned Happy to keep silent and to follow them when they reached the bottom of the ladder. Happy followed them down a ladder that led him into a room that was dark except for what they told him was the sacred fire, which they endeavored to keep continually burning.

On reaching the ground, the shamans guided him first to the north and then around a circle of the room to the west, the south, the east, and back again to the north. They assured him that if any one dared to move around the estufa in any other direction he would be instantly killed by witches or by evil spirits sent by The Trues.

The air of the estufa was far from pleasant, being filled with tobacco smoke from their pipes. This room, as indeed he afterward discovered in most of the houses of the Pueblos, was kept scrupulously clean, and the air during the middle of the day was far cooler than the heated air outside.

A number of other shamans sitting around the fire, smoking gravely, welcomed the lad when the chief shaman told them who he was and what they intended doing with him.

CHAPTER IX

THE FLIGHT FROM THE CLIFF VILLAGE

ALTHOUGH, when Awake-in-the-Night led the parties of Engleman and Francksen toward the cliff village, he first took them to the bottom of the cañon, he did this only to be able to reach the other side; instead of guiding them directly toward the ruins from below, he began slowly to climb the opposite slope. To do this he had been obliged to take them to a point higher up the stream where the slope could more readily be scaled.

"First show white men how to reach the cave from above," he said.

"Is it easier to reach the place from above or from below?" inquired Engleman.

"Heap easier above," was the reply.

Their guide evidently feared they might be seen. He was constantly on the alert, requesting them to walk in single file, to step lightly, and to keep silent.

"Maybe Joe Smith and some of his Indians come and see you," he said. "Follow Awake-in-the-Night and say nothing."

They silently followed their guide until they reached the top of the mesa on the opposite side of the cañon, about two hundred feet to the east of the cliff village. Here, as was not uncommon in those portions of the

country, the harder sandstone forming the surface strata had split almost vertically, but inclined somewhat toward the wall of the cañon.

"Get in here," said the Indian, stopping at the crack. Colorado Bill, who was next to the Indian, pointing at the small opening, remarked:

"Kin a feller git in the cave thar?"

The Indian did not think it necessary to answer this question, since he had already pointed to it as the place of entrance. Nor indeed did Bill expect any answer. What he said was not really a question. It was rather an exclamation of surprise at so narrow a fissure being the opening to the cliff village below.

The upper sandstone was broken here and there by a number of nearly vertical fissures, through some of which molten rock had been forced up from below, forming, when cooled, the black basalt common in that section. The particular fissure at which Awake-in-the-Night had stopped had not been filled with molten rock and extended down for a short distance only.

Instead of draining off over the edge of the precipice at this point, the water escaped, at least to some extent, through the cracks and, in the curious way that often marks the shapes of erosion surfaces, had worn off the edge of the sandstone from above much less than from below. Therefore, while a comparatively narrow crevice had been left at the surface, the fissure rapidly broadened beneath. Moreover, the fact that the sandstone dipped or inclined slightly toward the

cañon, had enabled the water to wear out a space between the surface and a short distance below the surface, that left an area extending in either direction farther than any of them could see.

The Indian led the way down a number of rough steps that had been cut in the walls of the fissure in the sandstone. This he did for some distance, until the hard sandstone was no longer to be seen and a rock was reached that was evidently much softer. Seeing this, Professor Engleman said to Mr. Christian, who was immediately back of him:

"We have left the sandstone, John, and are entering the shale."

"Yes, I noticed that. We are now at about the level of the top of the cave."

The nearly vertical fissure stopped abruptly at the lower part of the sandstone, where it rested on the shale. The Indian now began examining a number of openings that had been cut through the soft shale. Beckoning to his companions to follow him, he stooped down and began crawling through one of them. It was so narrow that he was obliged to lie flat on the ground. After passing in this way through a distance of about ten feet the opening increased in height, and they came to an inclined passage of sufficient height to permit them to stand erect. Both Engleman and Christian, accustomed as they were to working underground, had been estimating the distance passed through.

"From the rate at which we have been going, John," said Engleman, "we should soon reach the top of the

lower sandstone. I mean the sandstone on which most of the buildings of the village have been erected."

"I have come to the same conclusion, Joe," was the reply.

The passageway through which they were walking had been dug out in the soft shale, and was about six feet in height and three feet in width. At last it suddenly opened into a cave so wide that they could not begin to see the walls that bounded it to their right and left. As Engleman had predicted, they had reached the top of the lower sandstone. Here Awake-in-the-Night, turning to his companions, placed his hand on his lips to ask for their silence.

Directly in front of them a dim light could be seen. As they correctly supposed, it was the back of the cave they had reached; for, pointing toward the light, Awake-in-the-Night said:

"Cave city there. Wait till Awake-in-the-Night sees if men are still there."

It was a weird place to which he had taken them. While in the fissure in the sandstone enough light had entered to permit them to see surrounding objects, although somewhat indistinctly as they went farther from the surface. But here, in the tunneling in the softer shale, they were in absolute darkness, and even when they reached the place in front of the cave the only light they had was the dim light coming from what they were told was the front of the cave. They were well armed, however, and able to take care of themselves. They could not but feel that if Awake-in-

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the-Night had been playing them false, it would be easy for their enemies to shoot them down from the many positions in the cave from which, while they themselves might be readily seen, their enemies would be invisible.

It was fully fifteen minutes before their guide returned. He then gave them an astonishing piece of information that greatly discouraged them.

"The two white men you seek no longer here. Taken away by Joe Smith and Indians last night."

It must not be forgotten that all the way from their camp in the Colorado Desert in southeastern California, near the mesa they called the "Mesa of Rob's Dream," they had been pursuing Joseph Smith and his companions, with Rob's grandfather and father, as they had reason to believe. At last they had traced them to the Mesa Verde, and had located them in the cave in which they were now standing. It had seemed as if the long pursuit was at last about to come to an end, when they would be able to free their friends. When, therefore, they were told that they were no longer there but had been taken on ahead, they were greatly disappointed. Seeing that they wished to converse, Awake-in-the-Night motioned them to follow him, leading them to a place situated on the same level, but several hundred feet east of the opening, then he said:

"Now white men can speak heap without being heard. But don't speak loud."

"In what direction have the two white men been taken?" inquired Engleman of the Indian.

Awake-in-the-Night pointed to a direction that as far as they could judge from their remembrance of the position of the cave was toward the northwest.

"Were both of the white men in good health, Awake-in-the-Night?" inquired Rob anxiously.

"Yes," was the reply. "Indians tell Awake-in-the-Night both white men all right."

"How many men went with them?" inquired Blank.

"That's what I'd like to know," said Mr. Christian.

"Awake-in-the-Night not certain," was the reply, but thinks three white men and six Indians."

"How far from here is the place to which they were taken?" inquired Blank.

"Four or five suns from here on fast horses and long runs," was the reply.

"He means traveling rapidly a part of the night as well as the day," said Christian, "that it would require four or five days to reach the place."

"How many men are now in the cave?" inquired Bill of Awake-in-the-Night.

"Ten white men and thirty Indians," was the reply. When the conversation reached this point, Bill, turning to Professor Engleman, said:

"Cap, I don't know how this here thing strikes you, but ez fer me I think we could talk more onderstanding like ef we got out of this place whar we kin see each other's faces while we are chinning. Then

I don't kere to stay here; if them Injun fellers should diskiver we are here they could pick us off one arter another, easy like."

"I agree with you, Bill," replied the professor. And then turning to Awake-in-the-Night, he said: "Show us the way out of the cave."

Awake-in-the-Night led them to the surface, although by another path. The new path finally brought them to the edge of the same fissure as that at which they had entered.

"Now can talk heap," he said.

They began to discuss whether it was better to fight the people left in the cave or to follow the white men they had come all the way from the East to find.

"We are not only greatly outnumbered by these fellows," said Mr. Blank, "but are in a place with which we are not familiar. There are evidently many passages that have been cut through the soft rock. If then we attempted to make a raid on the cave, we would probably be exposed to their fire from many different directions. For my part, I think we had better leave the fellows here and follow those who have gone ahead."

"What do you think, Bill?" inquired Engleman of the scout.

"I agree with the gentleman wot has just spoken," said Bill. "In the fust place, them fellers hez more men than we hez. In the next place, we be in a bad place for fightin'," and then turning to Awake-in-the-Night he inquired: "Be thar many passages whar them fellers could git at us to shoot?"

"Heap many," was the reply. "This bad place for white men to fight in."

"You have not said anything, John," remarked

Engleman. "Let us hear what you think."

"Were the two Gordons still with these fellows I should say fight, no matter how greatly they outnumbered us, or how bad the place we are in may be for fighting. But we have not come all the way from the East to fight Joe Smith's Mormon band, or his Indian crowd, but to rescue our friends. My advice, therefore, is that we leave the cave and follow the tracks of the party that has carried our friends away."

The professor now turned to Blank. It was not difficult from the expression of his countenance to see that he was endeavoring to reach some conclusion, but had been unsuccessful in such endeavors.

"Have you changed your opinion that we should follow the party that has taken away our friends, Blank? I see you are apparently hesitating?" inquired

the professor.

"Have I changed my opinion?" said Blank; "No, I have not changed my opinion. But there is one thing I can't square. I understood you to tell me that you had been following Joseph Smith all the way from the Colorado Desert. You heard that they were bound for a certain highland in Colorado called the Mesa Verde. Well, you have tracked them to the Mesa Verde and now you hear they are again being carried away, this time to the northwest. Now, what I can't square is this: Were they really running away from

you in the Colorado Desert, or did you only think they were?"

Awake-in-the-Night had been listening intently to what Blank said:

"Joe Smith and his men not running away from you. Did not mean to stay here long. Know you were following him. Could have killed you all heap many times."

Colorado Bill was very angry when he heard what the Indian said:

"Then why didn't the tarnation varmints kill us ef they could?" he inquired.

"Heap too many white men in mining camps," was the reply. "If they kill any of you, white men from camps shoot Mormons and Indians and kill them all quick."

"I reckon thet's whar yer right," exclaimed Bill; and I might hev seed it at fust, but I was mad like."

By further conversation with Awake-in-the-Night they learned that Joseph Smith, who had many mining claims in that section of the country, was obliged to raise money for working other claims, and was making negotiations with two capitalists from the East to purchase some of his properties. They learned also that it was not their presence in the neighborhood of the gold-mining claims in the Colorado Desert, as our friends had imagined, that had caused Smith and his party suddenly to leave for Colorado, but because word had reached him that the people from the East were on their way to examine some mining claims in south-

eastern Utah. Smith had gone direct to the Mesa Verde, where he had planned to remain only until word reached him that the Eastern men would shortly be in Utah; that this word had been sent sooner than he had expected, hence his sudden departure.

"Then," said Engleman, "Joe Smith has probably taken our friends away so that they may make a final report on the properties."

Having reached the determination to leave the men in the cave village and pursue the party that had gone off with their friends, they instructed Awake-in-the-Night to lead them back to the cliff where Petromelinski and Happy had been left.

Awake-in-the-Night seemed pleased to leave the neighborhood of the rear entrance to the cave village, because, as he told them, the men in the cave might at any time follow the party that had gone on ahead with the white prisoners. He, therefore, lost no time in leading them to the opposite side of the cañon, several hundred feet from where they had left Petromelinski and Happy. From this point the ruins of the cave village were invisible, but they could see much of the general surface for some distance toward the north and west.

They had hardly reached the opposite slope when Awake-in-the-Night suddenly threw himself flat on the ground, motioning to his companions to do the same. Then without saying anything he pointed in the direction of the vertical fissure by which entrance to the cave could be made. There, strung out in a long line,

were issuing the Mormons and the Apache Indians who had been left in the cave. They could see them without much danger of being seen by them. Moreover, they could examine them with their glasses. The Mormons were leading and the Indians followed. In the midst of the Indians, as though they feared he might attempt to escape, they could see the fugitive Mashinsky.

"I'll have that fellow yet," said Blank. "Although they are taking the man along with them, I am glad to see they are at the same time keeping an eye on him. Should he attempt to escape the Indians would shoot him. What do you say, Awake-in-the-Night?" he added in a low tone to the Indian who was near him. "Do you think he can get away?"

"Black-haired fellow no get away," was the reply. "Apaches say stay with us. Awake-in-the-Night think he stay."

They remained lying on the ground watching the party through their glasses until they disappeared in the northwest, when Blank, who had been looking in the direction of the place where their two friends had been left on watch, suddenly cried out:

"Here comes Petromelinski! Won't he be pleased when we tell him that Mashinsky has gone on ahead with the others?"

"But where is Happy?" exclaimed Rob. "Why has he not come? I hope nothing is wrong."

"But there is something wrong," exclaimed Blank, who then observed an expression on Petromelinski's

face that was seldom to be seen there. Like all great detectives, the Russian had almost complete command over his countenance. But a mere glance at that countenance made it clear that something had occurred which greatly worried him.

CHAPTER X

COLORADO BILL ON THE TRAIL

THE Russian detective rapidly approached. The nearer he came the more evident it was that something had greatly disturbed him. Blank was so anxious to learn what this was that he started on a run toward the man, closely followed by the others.

"Where is Happy, Ivan?" he exclaimed before the men had reached each other.

"Yes, where is he, Mr. Petromelinski?" inquired Rob anxiously, as he closely followed.

"The boy has disappeared," was the reply. "I left him but for a few moments to fill our water-bottles at the spring below. On my return he was nowhere to be seen. Marks of a struggle have been left on the ground near the edge of the precipice where we had been lying. Some of these point distinctly toward the south, where perhaps he has been taken by his captors."

"Do you think the trick has been done quiet like?" inquired Bill eagerly. "Hed thar been eny fightin'? Ef the lad hed time to draw his gun I reckon thar would be drops of blood around on the ground."

"Come and see for yourself," said Petromelinski.
"You and Awake-in-the-Night are more accustomed to reading such signs than I am."

There was a rush toward the place where the capture had been made. Bill reached it first, followed by Awake-in-the-Night and Rob, with the others not far behind. In a few moments they were standing gazing earnestly at the marks on the ground. They appeared to point in all directions. To most of them these markings meant nothing; the separate marks did not appear to differ greatly. Not so however to Bill and Awake-in-the-Night.

"Hap hez been took by two men," said Bill, turning to the Indian.

The Indian nodded his head, indicating that he agreed, and added:

"Two Indians," pointing to the marks of moccasins worn by Indians in the neighborhood.

"I reckon these fellers must hev come suddent on the lad," said Bill, who had been carefully examining the ground in the neighborhood. "Hap hadn't time to draw his revolver or reach his rifle. Ef he hed thar would hev been something doin'. Sense I see no blood marks, I reckon he war took suddent. Kin ye see any blood marks?" he anxiously inquired of Awake-in-the-Night.

"Awake-in-the-Night find no blood marks."

But the trained eye of Bill now began to read in the tracks just what Happy intended he should. It was evident to him that many of them had been purposely made by the lad to show the direction in which he was being led away. The same thing too was evident to the Indian.

"Hap be a cute one," remarked Bill. "He hez made them marks plain like so ez to show us whar he hez been took."

"White lad heap bright," agreed Awake-in-the-Night. "Leaves marks that say to his friends, 'this way."

Rob looked closely over the edge of the precipice to see if there were any signs of a body having fallen or having been thrown over the edge.

"Nothing has fallen or been thrown from here," he said. "I can see," he added, "the place where a body would have stopped if it had fallen or been thrown from above."

Rob's companions crowded to the place where Rob was standing and eagerly examined the space below.

"You are right, Rob," said Professor Engleman, "there are no signs of a body having fallen or been thrown from above."

"Thar be nothing there," exclaimed Bill, after examining both the space below and afterward the surface near the edge. "And what be more, thar be no marks near the edge. What do you say to that, Awake-in-the-Night?"

The Indian, who had also been examining the edge, merely nodded his head to Bill, to say he agreed with him.

Norman now espied the edge of one of the cut letters. It was the letter that had been almost covered by the loose soil that had been thrown up during the struggle, the letter the sight of which had given Happy the idea

of leaving them along the route as tracks for his friend Bill. Picking it up and handing it to Bill, Norman said:

"I wonder what this is?"

Bill recognized it at a single glance.

"I know what thet be," he exclaimed sadly. "It was left here by Hap."

Seeing the look of wonder that came on the faces of those standing around him, he explained what the lad had been doing. Then turning suddenly to Engleman and Christian, he said:

"Now, then, gentlemen, we be here in an awful fix. The lad we all think so much of hez been carried away toward the south. The two white gentlemen you hev come all the way from the East to find hev been took toward the northwest. Now, I reckon, that kin be no difference of opinion but thet we must foller arter both parties. We kain't leave the lad, and we kain't leave the white gentlemen. Hap hez been captured by two. The others by a many. Now listen to Colorado Bill: He beant larned like ye, but he kin foller tracks, and so kin Awake-in-the-Night. Ye go with Awake-in-the-Night and foller the fellers toward the northwest. I'll go alone and foller the lad. Ez soon ez either of us find what we are arter, we'll try to jine the others."

Petromelinski listened with wonder to what Bill had said about the two white men being carried off to the northwest. He did not understand him, but as soon as Bill finished speaking he inquired with surprise:

"What do you mean by that, Bill? Don't forget I

know nothing of what has happened since you left Happy and me on the edge here."

A few words sufficed to explain what had taken place, at least so far as the fact that a large party had been present in the cliff village for a day or more; that some of them had carried away the two men for whom they had been so long searching.

"I dislike the idea of leaving the lad," remarked Engleman to Christian, "and yet I don't want to lose sight of the scoundrels who have carried off Rob's father and grandfather. What would you advise, John?" he inquired.

"I think Bill's idea is excellent," was the reply. "What do you say, Blank?" he added. "Would you take Bill's advice?"

"Would I take Bill's advice?" repeated Blank; "of course I would. It is good advice. Let Bill go alone in search of the lad. The rest of us will follow the other party."

"But how about the others?" inquired Petromelinski. "You say only some of them left with Smith. Are the others still in the cave?"

The detective listened attentively when they informed him that they had seen what Awake-in-the-Night assured them were the balance of the men leave the cave.

"Going to join the other fellows," said Petromelinski, rather to himself than to those around him. "But tell me this, Blank," he added, "was that fellow Mashinsky with the crowd?"

The assurance that the man for whom he and Blank were searching was with them, and was somewhat of a prisoner, greatly reassured Petromelinski.

"Gentlemen," he said, "I understand you have

made up your minds to follow these men."

"We have," replied Engleman; "but tell us, Petromelinski, what do you think of Bill's advice?"

"I think Bill's advice is good. And, Blank," he continued, "it is clear to me that we should go with these gentlemen, not only to help them in liberating their friends, but especially because we are bound, if possible, to run in that fellow Mashinsky."

"I don't like to leave Happy," said Rob; "but then, what can I do? Happy is very dear to me, but

my grandfather and father are dearer."

"Now, my lad," said Bill to Rob, "listen to me: It is nateral ye do not like to leave Hap alone. It is also nateral that ye do wish, like all tarnation, to go arter yer dad and granddad. Leave Hap to Bill. Bill likes the chap. Nay," he said in a pathetic tone, "Bill sartinly loves the chap perhaps as much as ye do."

"Let's look this matter straight in the face," exclaimed Blank. "Who are these Indians who have carried the lad off? Are they likely to murder him? Can you answer that question, Awake-in-the-Night?

Do you think these Indians are Apaches?"

"Awake-in-the-Night sure Indians not Apaches," was the reply. "Wear different moccasins."

"Can you make a guess who they are?" inquired Petromelinski.

"Awake-in-the-Night almost sure from moccasins that they are Pueblos."

"But what could they want with a lad like Happy?"

inquired Rob.

"Awake-in-the-Night not certain, but thinks they would make Smile-on-his-Face a medicine man. Smile-on-his-Face heap bright. Awake-in-the-Night would like to make an Apache brave of him. He thinks white lad in no danger."

"Then, Ivan," said Blank, "don't you agree with me that it will be best to leave the release of the lad to Bill and have Awake-in-the-Night help us to follow the tracks of Smith and his companions?"

"I do, Blank," said Petromelinski. "We will leave

the lad with Bill and follow the others."

Arrangements were quickly made whereby it was understood that word was to be left at all mining camps along the road during their journey.

Bill decided that he would leave his mount, as it might be in his way. They promised him that they would leave it and Happy's mount at one of the mining camps. That Bill should call for both should he succeed in finding the lad.

The Indians who had captured Happy had evidently taken his weapons with them.

"Ef ye kin spare me an extra gun let me hev it," said Bill, "fer the lad. Ef I kin git him away from them fellers, he could make it speak."

"Take one of mine, Bill," said Petromelinski. "I know he is able to make good use of it."

We will first follow Bill as he began at the tracks left by Happy.

The letter of the alphabet Norman had found nearly covered up by the earth greatly affected him.

"Hap," he exclaimed, while looking earnestly at the letter he held in his hand, "ye sartinly be a kindhearted chap. Bill knows what ye war up to when ye cut out thet letter. Ye intended to keep it fer them lessons in spellin', writin', and readin' ye were givin' me. I hope Awake-in-the-Night knew what he was talkin' about when he said it war probably Pueblo fellers what took ye, and thet they won't hurt ye. But ef they do," said Bill savagely, "I'll make them pay dear fer yer life. And now," he said, "I must stop talkin'," and he began to examine the tracks of the moccasins.

"Good-sized men," he said, "jedging from the size of the feet and the distance a-tween steps. Ez to the direction," he said, "thar kin be no doubt. Hap's steps pint to the south. The two men hed the lad a-tween them. I reckon they war holdin' his arms. Wall, thet didn't keep him from comin' down hard every now and then so thet I kin foller his tracks easy like."

That the direction of the markings had been purposely left by the lad was beyond doubt; for, coming to a place where the ground consisted of hard rock, so that the trail would ordinarily lack distinctness, Happy had succeeded in leaving marks that Bill had no difficulty in following. At last Bill saw something lying on the ground that brought him to a sudden halt.

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It was another of the letters Happy had cut out from the leaf while waiting for Petromelinski. Bill picked it up with a glad smile.

"I tumble, Hap," he said, as if the lad was with him. "In course I tumble. Ye say, 'I hev left this to pint out the way.' Now, I reckon, thar will be others like this one. I don't pretend to say I know how ye cut them out, Hap, and how ye could let them fall without the fellers what be leadin' ye away seein' ye; but I see ye hev done it, and I know how cute ye be, and Bill don't want to know anything more. He'll foller the signs what ye hev left for him, no matter whar they lead."

When Bill came to the next letter, he grinned and said to himself:

"Didn't I say so? The lad hez been and done jest ez I hev pinted out. Ef, ez I hope, he hez been able to leave these regular, it will be an easy job fer me to catch up to him."

The next letter Bill picked up was rolled together into a little pellet. This had been done when Happy feared the men would see what he was doing, which of course would have defeated him.

"I see, Hap," exclaimed Bill, "yer gettin' scared like. Fear the chaps on each side of ye will tumble to yer little game and stop it."

In this manner Bill rapidly followed the trail left by Happy, and had no difficulty in tracing it until he reached the Pueblo village, at which the men had stopped.

But long before, Bill's active mind had been planning what he should do. He was trying to figure out, as he expressed it, the purpose for which the Indians were carrying the lad off. He knew that toward the south, in the northwestern part of New Mexico, in which territory he had now been for some time, was a reservation of Ute Indians, and that a number of Pueblo villages were situated on the tops of buttes or mesas.

On the morning of the second day Bill saw far above him in the clear air an unusually large eagle. Knowing that the Indian medicine men, especially those of the Pueblos, place great value on the feathers of the eagle, he succeeded in killing the bird by a shot from his rifle, and plucking the large feathers of the wings and tail placed them in his coat, and proceeded on his way until he reached the Pueblo village above referred to.

There was nothing peculiar about this village. Like many others Bill had seen in that part of the country, for he knew the great Southwest well, it consisted of houses erected on a series of terraces, giving to the place at a distance the appearance of a number of huge steps rather than of houses. They were built not of cut or chiseled stone, but of pieces of sandstone or limestone that had been split into slabs and more or less broken into regular blocks.

While in case of an attack it would have been possible for the Pueblos to put up a good fight by drawing up rude wooden ladders they employed in passing from one terrace to the next above, yet it was

evident that the inhabitants of the village were no longer in fear of attacks from their neighbors. They were living in more peaceful times than had their ancestors.

This Pueblo village was evidently of considerable age. The lower wall was higher than the others and was originally a dead wall. But it had not been kept in good condition, so that it could be scaled readily without the use of the ladder at a point where it had broken down.

Bill knew there would be no danger in his going boldly into the village, provided, of course, he was not recognized as being connected with Happy.

CHAPTER XI

HAPPY'S ESCAPE FROM THE PUEBLO SHAMANS

No one in the village appeared to recognize Bill as having any connection with the lad who had been brought there by the shamans a short time before. When it was learned that Bill had two very beautiful peacock feathers for sale, many were eager to buy them. It should be said here that the boys had purchased a number of these feathers from the Indians in southern Arizona while on the march to the Mesa Verde. Happy had given two of them to his friend Bill. Now what Bill wished to do was to let Happy know he was in the village. Just how to do this he could not determine. He felt sure, that at least for a day or two, they would keep the lad hidden, especially when he, a stranger, was in the neighborhood, and he acted accordingly.

Knowing the esteem in which the Indians held feathers, especially the gorgeously colored feathers of the peacock, and the sacred feathers of the eagle, Bill had counted on getting those he carried into the hands of the principal medicine man of the tribe. If, as he believed had been the case, Happy had been carried off by the medicine men, he would see the peacock feathers, and, recognizing them, would know that Bill was in the village. He had no doubt that Happy would

recognize the feather, since, as he had often so truly said, "Happy was sech a cute one."

At first he refused to part with the feathers until word having been taken to the shamans that they were being offered for sale by a cowboy, the principal shamans, among them the two who had carried the lad away, came and tried to persuade Bill to part with them. Of course Bill had no way of knowing that these were the men for whom he was looking, but as soon as he learned that they were the highest of the medicine men, which indeed he might have known from the character of their headdress, he agreed to part with one of the peacock feathers and a few of the eagle's feathers for a few turquoises and a silver buckle for his belt; for the Pueblos, as is well known, are skilled silversmiths. He refused to sell the other peacock feather and the remaining feathers of the eagle, except at a price greater than the medicine men were willing to give.

But let us now return to Happy at the time of his first visit to the estufa. After gravely welcoming the lad, the other shamans continued smoking their pipes in silence. Finally the chief shaman, whose name, as he had informed Happy, was Light-of-the-Sun, said that some of the medicine men would soon attend in a body in order to drive the witches away from a man of their tribe who had recently died.

"Did the man die to-day?" inquired Happy, who had made up his mind to take an interest in all that

was going on so as the sooner to gain their confidence.

"No," was the reply; "man died three suns ago."

"What will you do?" inquired Happy.

"Shamans will chase away witches who try to follow the dead man's spirit."

"What would happen if you did not drive the witches away?" inquired Happy.

"Witches would drive spirit of dead man into place where he would always be unhappy. But shamans heap too big for witches. Man will soon be all right. Shamans go again to-day to kill things for him."

Seeing that Happy did not know what they meant by "killing things," Light-of-the-Sun explained that when the spirit of a dead man reached the happy world beyond, he would continue doing nearly the same things he did in this world, only that the things he did there are much better and more beautiful. That in order to start him in his new life, it was necessary to send on ahead some of the things he might need in the hereafter.

"But how can you do this?" inquired Happy.

"Take things to killing-place. Shamans then kill them and send them on ahead."

The killing-place, as Happy afterward discovered, for they took him to it that same day, was situated outside the regular graveyard of the village. It was a sad-looking place, never entered except by mourners, or by the shamans. It consisted of a level piece of ground, the surface of which was covered with broken guns, bows and arrows, bits of crockery, torn blankets,

cooking utensils, dresses, and the charred bodies of horses and cows.

"Why don't you leave the things unbroken or unburnt?" inquired Happy. "Would they not then be of more use to the spirits of the dead?"

"If things not killed," was the reply, "they would never get to the Land of the Hereafter."

The shamans treated the lad kindly. After keeping him in the estufa for several hours they permitted him to leave the room and visit some of the houses. They warned him, however, not to attempt to go away from the village or out into the streets unless in company with some of the shamans.

On the second day after his arrival at the estufa they showed him a great piece of magic, which was performed for the purpose of driving away a severe illness from a man who had been brought to them for treatment. This treatment was not given in the great estufa, into which only the shamans and the acolytes were permitted to enter, but in another room near the estufa, called the "medicine hoganda," a conical hut used solely for treatment of sickness by the medicine men.

When Happy was led by the shamans into the medicine room, he found it crowded with people who had come with the sick man to see the great magic that they knew would be exhibited when he was cured by the shamans.

The people were seated in circles on the ground. The room was dimly lighted by the sacred fire, and

three or four shamans were dancing violently in the inner circle. Other shamans were seated on the ground blowing the sacred smoke from their pipes. One of them informed Happy that this was necessary in order to blind the witches, who would otherwise prevent the man from being cured. The shamans who were dancing kept up a weird chant. They were getting ready to administer their medicines.

The medical practice of the Pueblos, as exhibited in that room, was certainly medicine of an exceedingly odd character. The shamans were not only doctors, but were also druggists. They not only prescribed medicines for their patients, but also administered them. As Lummis describes in his interesting book, "Some Strange Corners of Our Country," a book from which most of the information concerning the shamans of the Pueblos has been obtained, they did not carry their medicines in the ordinary glass phials of the druggists, but in their nimble fingers.

Feathers, especially those of the eagle, had evidently much to do with the magic treatment. Each of the shamans in his dancing around the room held some of these feathers in his hand. It was surprising the different offices the feathers were called on to perform. Sometimes they were used for tossing the witches up through the top of the room where the winds could blow them away. At other times they were used for probes, lancets, knives, saws, and other surgical instruments.

Happy was interested especially in watching Light-

of-the-Sun as he danced toward and from the man who had been brought into the hoganda for treatment. While chanting he would rush furiously toward the sick man, as if he intended to drive away the evil spirit that was the cause of the man's sickness. Then he would suddenly dash away and go whirling around in circles with the other shamans, but only again to rush toward the patient.

These to-and-fro motions Happy shrewdly guessed were for calling the attention of the people to him, for apparently as soon as he was satisfied that all eyes were fixed on him he began his so-called magic. Resting the tip of a large eagle feather he held in one hand against the lips of the patient, a feather, by the way, he had obtained that morning from Bill, he commenced violently sucking through the quill end. In some way, just how Happy was unable to understand, the feather seemed to swell, as if something was passing through it from the mouth of the sick man into the mouth of Light-of-the-Sun, who now commenced coughing and acting as though he were choking, when suddenly removing the feather from the mouth of the sick man he applied his hands to his own mouth and apparently drew from it a long piece of cactus covered with sharp thorns, which he proudly showed the different people in the room. No wonder the poor man had been sick, to have carried such an object in his stomach! Now surely he could count on becoming well after having been rid in this magical manner of this terrible thing.

Happy's plan of hiding his sorrow at being carried

away by the shamans was beginning to bear good fruit, for they trusted him more and more. Besides, he had now reached the conclusion that had not the shamans carried him away they might have taken Rob or Norman. He was glad to have taken Rob's place. As to Norman, it made him smile when he thought how poorly fitted such a lad would be to make any headway against such captors. He therefore kept up his smiling countenance to such an extent that they began to call him "Pahozone," which means happy or good-natured. Indeed, in a little while this was the only name by which the lad was known. Although a different word from the one that Awake-in-the-Night had employed in the Apache language, it evidently meant the same thing.

On the third day after his capture Happy was surprised at a beautiful peacock feather that Light-of-the-Sun brought to show him. He instantly recognized it as one of those he had given to Bill. He had sufficient control of his countenance, however, to prevent Light-of-the-Sun from seeing that he had recognized it.

"What a beautiful feather!" Happy said. "Does the bird from which you got it live in your country?"

Light-of-the-Sun, who was pleased that the lad had been attracted by its beauty, said:

- "No, Pahozone, bird live far away from here. Got it yesterday from man."
 - "Man still here?" inquired Happy.
 - "Light-of-the-Sun think so," was the reply.

"Beautiful feather," replied the lad. "Good for prayer-stick?" he asked in an inquiring tone.

"Heap good," was the reply. "Better than any

other feather."

"Cannot Light-of-the-Sun get another beautiful feather for Pahozone if the man is still here?"

"Will try," replied Light-of-the-Sun; "but feather

cost heap to buy."

It is needless to say that Happy kept his eyes wide open for other signs of his friend Bill. He was sure now that Bill was in the village and had already been planning how he might make his escape should he see him.

Next day Light-of-the-Sun came to Happy and proudly gave him another peacock feather, saying:

"See heap beautiful feather Light-of-the-Sun has bought for Pahozone."

The lad's quick eye had seen a small object in the hollow part of the quill. Taking the feather from the shaman's hand and holding it so as to conceal the quill, he said:

"Light-of-the-Sun is very kind to Pahozone. Maybe he will show him how to take feather far from here and make a prayer-stick of it."

"Yes, Light-of-the-Sun teach Pahozone to be great shaman."

When the shaman left Happy alone, he took the opportunity when he was sure no one was observing him to remove a small pellet that had been placed in the hollow part of the quill.

"I thought so," he said to himself as he opened it and saw one of the letters that he had dropped along the way to serve as a trail for his friend Bill. "Bill is not only here, but he knows I am here and has sent me this message."

This novel letter was probably the shortest ever sent by one person to another. It consisted not only of a single word or even of a single syllable, but of a single letter only. Short as it was it greatly affected the lad, for when looking at it he found that Bill had not taken any letter for his message but had picked out the letter B.

"Hello," he said to himself, "you're getting on, Bill. That's right," he said, "B stands for Bill."

When the shaman next saw Bill he was exceedingly anxious to get the rest of the eagle feathers, and informed him that some great magic was to be seen in the medicine house.

"What kind of magic is it?" inquired Bill. "Will ye let me see it?"

"Only Pueblos can see magic," was the reply.

"But suppose I give ye all these feathers," said Bill, taking out half a dozen of the eagle's feathers, still retaining, however, about half of those he had taken from the bird. "If I give you these kin I see the magic?"

Light-of-the-Sun hesitated.

"If the white man is heap sick Light-of-the-Sun will take him into the hoganda and cure his sickness."

"White man is heap sick," said Bill.

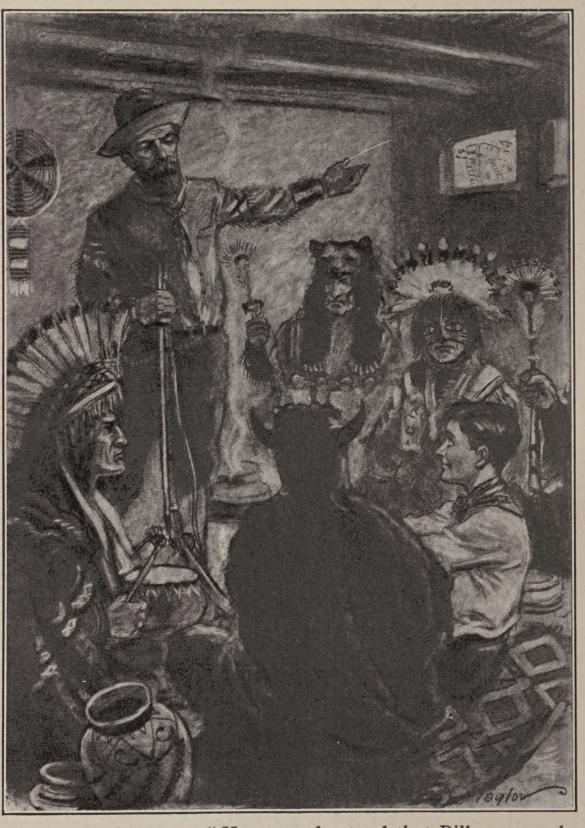
"Then Light-of-the-Sun will take him after a while to the great medicine room where he will take this sickness from him."

That afternoon, as Happy was again taken into the medicine room to see the magic, he saw Bill seated immediately opposite him. He managed to conceal his great joy, although he felt like rushing to Bill and hugging him.

Bill's supposed sickness was treated very successfully by Light-of-the-Sun, who drew several large stones apparently from one of his legs and a rifle bullet from his right shoulder. Bill declared himself entirely satisfied with the result, assuring Light-of-the-Sun that he had never seen such wonderful magic in his life.

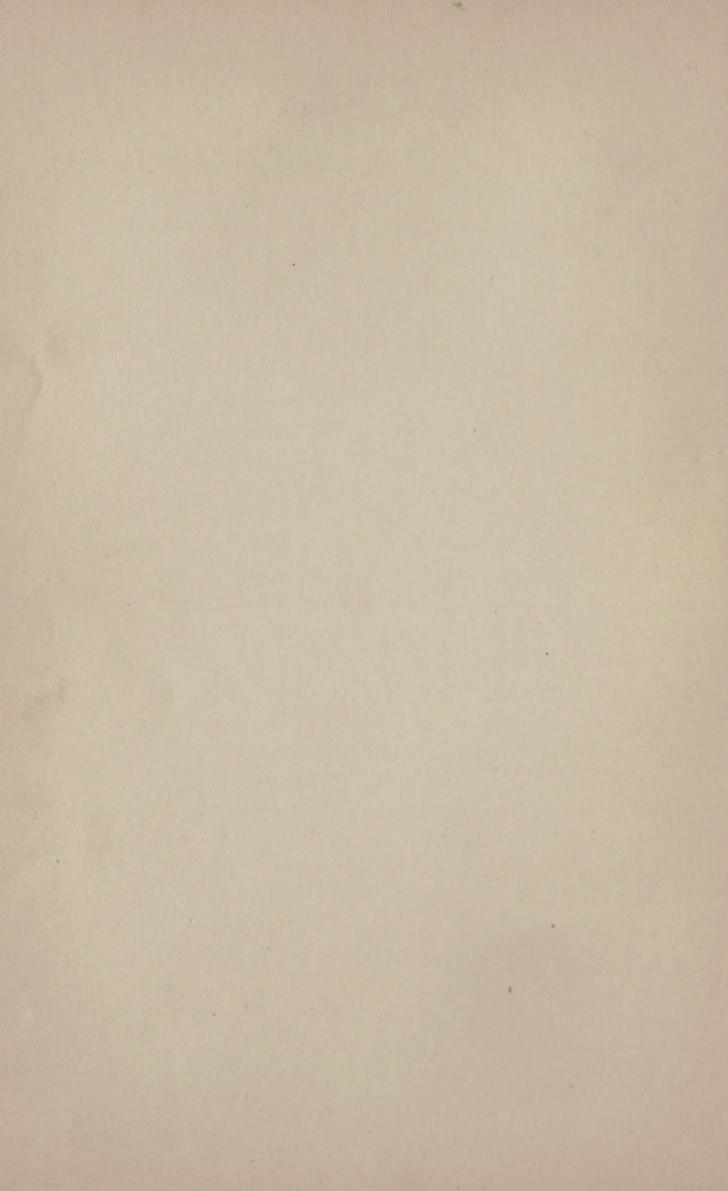
Bill still had a number of the eagle's feathers equal to those he had already sold to the shaman. What he now wished to do was to get back Happy's rifle and revolver, so he offered to sell all the feathers he had for a good rifle and a gun. This did not surprise them, for they knew that cowboys place an especial value on such things.

Light-of-the-Sun agreed to the sale and brought out a number of their rifles in order to make the barter, but Bill was too old a hand to be fooled by the old weapons they brought him. He turned down one after another as being no good, or as he called it, "heap bad." At last when weapon after weapon had been discarded they brought out Happy's. Bill pretended that they were also "heap bad," but at last permitted



"Happy understood that Bill was speaking to him and not to the Shamans" Page 143

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himself to be persuaded to make the bargain, so he went off with them.

Bill had not spent his nights in the village but considerably to the north of it. Taking the weapons he bid the shamans adieu, while Happy was an onlooker.

"I go," he said, "to my camp over there," pointing to the north. "Maybe I never come back. Maybe I wait till late to-night."

Happy understood that Bill was speaking to him and not to the shamans. He was informing Happy that he would remain in his camp until late that night, and hoped that something might happen by which Happy could reach him. When Bill said, "Maybe I come back to-night," he understood that he was coming back, and then when he added, "You look for me," the shamans understood that they were to wait until the morning, but Happy knew it would be that night.

There was to be a great powwow in the estufa house that night at which all the shamans were to be present. Happy pretending to be sleepy was permitted to rest for the night in a house adjoining the hoganda.

Fortunately, a great storm arose with heavy rain and thunder. The night was so dark that it was impossible to see the hand before one's face. The shamans believing that Happy was secure, remained in the dry, comfortable quarters of the estufa, while all the people in the house where Happy was sleeping had also gone.

As Happy was lying in his room he felt a hand placed over his mouth. A bright flash of lightning permitted him to see it was Bill's hand. Bill then

walked away from the lad beckoning him to follow. He did this at once, following Bill quietly from terrace to terrace until they were finally outside the estufa and on the plain, on which the butte stood, and thence on their way to the north.

CHAPTER XII

HAPPY AND BILL TAKE REFUGE IN THE CLIFF HOUSE

It is not surprising that Bill and Happy were able to make their escape from the Pueblo settlement without being stopped. The storm was one of the most severe ever known in that section. A heavy rain, driven by a high wind, swept over the village in drifting sheets, that made every one only too glad to remain indoors. Except for the momentary lightning flashes the night was of almost pitchy darkness. But the man and boy rejoiced at the storm. It could not be too severe for them. Its very severity was their safety.

"Here be yer shootin' things, Hap," said Bill as soon as they had safely left the settlement. "I hev kept them ez dry as possible. Carry 'em so ez to keep the water off ez well ez ye kin. Ye may hev to use them when the shamans larn thet ye hev cut loose."

"Thank you, Bill," said Happy as he took them from his companion. "I am glad to get my rifle and revolver again. I will try to use them next time if the shamans make an attempt to capture me."

The condition of the night did not prevent them from keeping up a conversation, for each had much to tell. Happy naturally wanted to hear the news Bill had brought from his friends. He was especially

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anxious to know whether Rob had seen his father and grandfather; whether there had been any fight between them and Joseph Smith and his Mormon and Indian followers.

The news Bill brought Happy was indeed astonishing. When he was informed that Smith and his companions had again carried off the two men to the northwest he at once inquired, just as Petromelinski had done, whether Professor Engleman and the others had not been mistaken when they believed the Mormons had been running away from them; whether they had not merely determined to go in this direction independently of strangers being in the neighborhood of the "Mesa of the Dream." They then got chatting about the different plans Happy had formed for showing Bill the direction in which he had been taken.

"If I could have reached my gun," said Happy, "I do not believe they could have carried me off, but the first thing I knew two Indians had grabbed me by the arms. I was sure that when Petromelinski returned and told the others what had happened, you would follow the trail, so I tried to make it as plain as I could for you."

"Ye did make it plain fer sartain," said Bill. "Them letters war very cute, and so war the tracks ye left over the rocky parts. I'll back ye to fool them fellers every time."

The night was so dark that one less accustomed to travel than Bill, as it were by a sense of direction, would have been unable to find his way. Of course

they were both soaking wet, although they managed to keep their weapons under cover.

It was between nine and ten in the evening when they left the Pueblo village. About half an hour after midnight the storm passed, the sky cleared, and they were able to make their way rapidly, taking their direction from the stars. Moreover, a wind commenced to blow that did much toward drying their clothing.

They had been traveling very rapidly, for they knew that as soon as the Pueblos missed them they would start after them on their fleet horses.

"Be ye blown yet, Hap?" inquired Bill anxiously.

"No, Bill, I'm in good condition. You can put a spurt on if you want. I can keep this up till daylight."

"Good boy; then we'll do it," and indeed they did.

It was now daylight. The sun had been above the horizon for more than an hour. Their clothes were rapidly becoming less unpleasant. Bill now stopped by a water-hole and gave his companion some food he had been carrying in a pack on his shoulders.

While eating a scant breakfast, Bill inquired of the lad:

"Hev they treated ye good, Hap?"

"I would not ask for kinder treatment," was the reply. "Of course, Bill," he said, "I couldn't help wondering how things were going on with our people, for when you and the others left Petromelinski and me to watch the opposite side of the cañon, it seemed to me that it would not be long before Rob would see both his father and grandfather."

"I be glad to hear them fellers were kind like to ye," said Bill.

"If we succeed in escaping from the Pueblos, Bill," inquired Happy, "you have no fear of overtaking our

friends, have you?"

"No, I kin do thet, all right," exclaimed Bill; "but it be a much harder thing to keep ahead of the Pueblos, who in course are follering us on horses."

"What are your plans?" inquired Happy.

"Arter we left you," said Bill, "Awake-in-the-Night showed us how to git into the big cave back of the ruins of the big cliff village."

Bill then told Happy of the fissure through the sandstone and of the galleries in the soft shale, leading to the ruins. He also told him of how they had seen what Awake-in-the-Night believed to be all who had been in the cliff house, come out of the back of the cave and disappear toward the northwest.

"As far then as one kin see no one be left thar. we kin git ahead of them Pueblo fellers, who are arter us, fur enough to reach thet place fust, we will either be able to hide so they kain't diskiver us, or ef they git thar too, we kin put up a good fight against the number they probably will bring agin us."

Happy was in almost perfect health. Life in the open air had kept him in such excellent condition that he had no trouble in keeping up with Bill's most rapid gait. Seeing this, Bill again increased his pace until they came almost to a run. In this manner they made rapid progress, and with the exception of a short rest

toward noon they continued their flight at this gait until after two o'clock in the afternoon.

"I remember passing this place with the shamans, Bill," said Happy. "I think you will find on our left the cañon of a stream that I believe empties into the Rio Mancos, in the cañon of which the cliff village is situated. Since our enemies are mounted, if we can reach the cañon of that stream and follow it we would be on more nearly equal terms with them, for they could hardly follow it on horses. If we are careful with our trail we might fool our pursuers and make them believe we had continued on the surface."

"I see, Hap," said Bill, grinning, "ye hev lost none of the larning I give ye while in Texas. Yer idee is good. Let's make false trails and then gallop into the cañon."

They succeeded in doing this, and were fortunately able to enter the canon and even to make rapid progress along its banks.

It is true that the heavy storm had made quite a flood in the river, but Bill was fortunate in finding a safe path along the higher parts of the slope on the left-hand side, where they were out of the reach of the storm waters. Bill had expected to find the stream flooded and had at the first opportunity crossed to the side on which the cliff house was situated.

"Further down, Hap," he said, "it may be not crossed so easy."

Once or twice they could see their pursuers on the other side of the cañon. Their enemies, however, did

not see them, so they passed on and were now approaching the cliff village on the Rio Mancos.

At one place along the route before they entered the cañon, Bill collected a number of the dried stems of the estrana, or buckhorn cactus, a resinous plant that burns with a fairly bright light. Though wet by the rain of the previous day, the stems had dried again. The variety of cactus Bill selected constituted the prehistoric candle. At Bill's suggestion Happy also collected a number of the stems. The pursuers had evidently lost time in following the false trails they had left for them. Indeed, it was due to this only that Bill and Happy were successful in reaching the upper slope of the cañon, near which Awake-in-the-Night had showed them the entrance.

"Ef you see anything that is good to eat try to shoot it, Hap," said Bill.

"Of course, Bill," said the lad, "you know that the firing of a gun will show the Indians where we are."

"I kain't help that, my lad," was the reply. "We must try to get something to eat. Ef we are shut in the cave by the Indians with no food we'd be starved sure and hev to surrender."

One may readily wander for great distances in the Southwest without finding game. It is, however, especially apt to follow the cañons and the streams running through them. Possibly the heavy rain had something to do with it, but they were certainly fortunate, in that shortly before they had reached the point of entrance to the fissure, Happy succeeded in killing a

large mountain sheep while Bill brought down a kid which had been following its mother. Carrying the sheep on his shoulder, and calling to Happy to bring the kid and follow him, Bill soon entered the narrow edge of the crevice that extended down through the sandstone to the soft shale beneath.

"Did ye see anything when ye went down below the top of the crack, Hap?" said Bill as they were making their way slowly down the inclined path, a difficult task, loaded as they were.

"I saw the shamans descending the opposite side of the cañon. You can make up your mind they know this place and are bound for it."

"I allow it'll be hard for them to cross the stream," said Bill, "but they'll do it."

They were soon at the low cylindrical opening through which they were obliged to crawl. Bill went first, but backward, taking hold of the sheep and drawing it toward him. It was by no means easy, but with Happy's help he at last succeeded, when he was followed by Happy who had less trouble in bringing the smaller kid with him. As soon as they reached the gallery where they could walk erect, each lighted an estrana stem so that they were able now to see the character of the passageway, which of course had been quite impossible when Bill had first entered it.

They noticed, to their surprise, that numerous branch passageways opened out into the one they were following. Indeed, as they neared the cave the soft shale appeared to be literally honeycombed with pas-

sages. Some of these were so low that one was obliged to stoop in order to enter. They were excellent places, however, in which one could disappear if hard pressed by a pursuing enemy; for, provided the passages led as they usually do into rooms, an enemy would have but a poor chance for his life if a determined person stood at the other end of the low opening.

Neither spoke, although both closely observed the general position of the side passages. Happy especially noted one of the main passages that led more nearly to the north than that through which they were going, which Bill informed him extended in almost a straight line to the front of the cave.

They had now reached the portion of the cave immediately back of the opening at the village, the dim light of which could be seen in front of them. They were beginning to consider whether or not it was best to venture cautiously into the main cave, or to endeavor to find a smaller room that could be entered only by the low opening from below, which would enable them to make a stand in a fight against the Pueblos.

Something occurred, however, that compelled them to come to rapid decision. They distinctly heard the footsteps of the Pueblos descending the fissure in the sandstone. As Happy had said, they were evidently making for the cave in which they were standing.

"Straight ahead, Hap," cried Bill; "we'll risk going to the ruins of the village!"

"There ought to be plenty of good places to hide,

Bill," said Happy, "for you remember how many houses there were, do you not?"

"I reckon I do, fer sure."

Staggering with their load of meat they were soon in the open air and sunshine of the front of the cave, but back of the houses. The rounded towers were seen at each end of the village on their left and right. They had a very different appearance from that they had from the other side of the cañon.

A swift glance at the buildings enabled Bill to select a two-story house in somewhat better condition than the others, that stood back of the rounded tower at the side of the cave which lay on the extreme northern end of the village.

Beckoning to Happy to follow him, Bill entered the second story of the house; for, as is common in such houses, the first story had its roof projecting some little distance beyond the floor of the second story. The place they entered was a large empty room with a single narrow window. They were glad to see that this room was provided with an opening at the back, or opposite the window, that was evidently intended to provide a refuge for those shut in the outer room should their enemies succeed in entering it.

Turning to his young friend, Bill said:

"Crawl in, Hap, and tell me what ye kin see."

Happy did so and, in a moment returning, said:

"There is another room almost as big as the one we are in. It appears to be lighted from above. Yes, I see," he added, "there are openings there."

"And that is all ye kin see, Hap?" inquired Bill.

"No," was the reply, "there is another low opening in the back of the room."

"Then in we go," said Bill. "This place will sarve us to hide in at least fer a while."

When they first entered the room the light that found its way through the small openings at the top and bottom was so faint that they were unable to see anything. As they became more accustomed to the dim light they began to look around them.

Standing at one of the peep-holes near the top of the room, Bill could see through the narrow window of the main room the backs of the houses of the village. Happy endeavored to do the same thing, but the opening of the window was too high. On examining the window, however, he found that the people formerly occupying the room had provided for just such an emergency. Rude steps had been cut in the wall so as to enable a shorter person to reach and see through the opening.

"They have made this place just my size, Bill," whispered Happy.

"They hev, Hap, and wery wise in them; fer often I reckon the children were shut up in these places. The steps on which ye air standin' war intended to let their kids look through the peep-holes to see ef any one war comin' outside."

They could now distinctly hear the footsteps of their pursuers. Several times they passed rapidly, one after another, in front of the house. Happy distinctly

recognized Light-of-the-Sun and the other shaman who had carried him away. Four others were in the pursuing party. They appeared to be searching the different houses as well as examining the ground for some trail. But, fortunately for Bill and Happy, so many trails had been made by the Indians and Danites who had only recently left the place that the last comers were confused.

"Shall we make a fight here, Bill?" inquired Happy.

"Not yet. I know we could pick 'em off one arter another. Ef I were alone I might do it, but I ain't takin' no risks on yer being shot. What do ye think about it?"

"Let us give them a chance for their lives, Bill," said Happy. "If they actually attack us we will fight, but let us wait awhile and see."

"Yer word goes, Hap," said Bill.

They remained in the room for fully fifteen minutes, during which time the shamans passed them on five different occasions. At last they saw a fresh trail leading directly toward the house in which they were hiding.

"Get your gun ready, Hap," exclaimed Bill.

The lad did so, when suddenly something occurred that stopped the running of the Indians toward the house. They had evidently heard footsteps in the rear; for, turning suddenly, they ran a short distance toward the front of the cave, and threw themselves down as though listening. Then, as if satisfied, they started to

their feet and ran toward the back of the cave in the direction of the gallery by which they had entered.

"Let's follow, Bill!" said Happy; "it may be some of our friends."

"I'm with you, Hap," cried Bill.

They were soon in the outer room looking carefully at the Indians, who were now on a full rush toward the back of the cave. The loudness of the sounds produced by the footsteps of the pursued and the pursuers surprised them no little. Although shod with moccasins, the soft blows could be distinctly heard. They afterward discovered that this was due to the cave acting as a huge whispering-gallery, throwing any sounds produced inside the cave to a focus near its opening at the ruined village.

Bill and Happy had now left the house in which they had been hiding and could distinctly hear the footsteps running through the back of the cave. Suddenly the shot of a rifle rang out, and a flash of light showed that it had been discharged at the fleeing figure in front.

Was the pursued one of their friends? Had he been shot? These were questions that both Bill and Happy anxiously asked themselves. But no, the ball had evidently sped wide of its mark, for the footsteps were heard again running and the shamans continued their pursuit.

"Let's follow them," said Bill. "This feller may be Awake-in-the-Night, or some of our friends come to bring word. We kain't leave him now."

Reaching the gallery through which the shamans

had passed, Bill and his companion gave them time to reach the sandstone at the bottom. Then following rapidly they made another pause before passing out through the low opening into the sandstone crevice.

When they reached the crevice the shamans had ascended to the top. They therefore climbed the inclined steps in the sandstone and, again waiting long enough to allow the shamans to get ahead of them, passed rapidly to the place where they could see the lower country.

After waiting here for a while, while lying on the ground, they could see in the distance an Indian mounted on a swift steed moving rapidly toward the northwest, followed by six mounted shamans in hot pursuit.

"We be in luck, Hap," exclaimed Bill. "Let's make our way back to the cave."

CHAPTER XIII

HAPPY LIBERATES PETE

As will be remembered, Pete, the cowboy, the guide of Robert Harold Gordon, Jr., had been imprisoned by Joseph Smith in a lonely cliff house near the top of an almost inaccessible precipice. This house was situated in one of the many side cañons of the Rio Mancos, not far from the ruins of the cliff houses referred to in the preceding chapters.

When first imprisoned, Pete shared this prison with his employer. At the request of Smith, however, so as to be with his father, Gordon agreed to aid him in professional work in the neighborhood. But the elder Gordon entirely failed to recognize his son and, indeed, could only talk intelligently on matters pertaining to his profession. For such matters his memory was not in the least defective. On everything else it was a blank.

Robert Harold Gordon, Jr., first refused to aid his father unless Smith would permit Pete to go with him. He knew how lonely the man would be if left to himself, but when he was refused Pete urged his going.

"I reckon I'll be very lonely, but ye hed better go," he said. "Ye kin do nothin' here to help me and nothin' to help yer father. Go with him and p'raps some-

time ye may hev a chance to escape, and put the white people in the mining camps on the lookout for us all."

Pete's reasoning was so strong that Gordon agreed. Pete therefore had been left alone for a long time.

Every now and then Gordon was able to spend a few days with Pete, and kept him informed as to what was going on, as well as to the condition in which he found his father. They had both hoped that as time passed some change would take place, especially since the son's companionship might be expected to revive the past.

It is not easy thoroughly to appreciate the condition in which Pete found himself in his lonely prison. It is a most trying experience for any one to remain imprisoned month after month with nothing to do but to eat, sleep, and wear himself out in useless efforts to escape. Pete had tried again and again to find a way out of his prison. He knew there was an entrance from the rear, for he had been brought into the cliff house in that way when blindfolded. Moreover, his food was brought him by an Apache Indian Smith had instructed to attend to this work, and he always came from the rear. Although Pete had repeatedly endeavored to find some place in the little room immediately back of the main room, that was provided with the usual low door through which one was obliged to crawl in order to pass in or out, he never succeeded in doing so. It is true there was a second room, darker than the first, but as far as Pete could see it had no

connection whatever with the soft rock lying immediately back of it.

When Gordon was brought back and forth his eyes were always carefully blindfolded, so that except that he had passed through what he believed to be a long tunnel he could give Pete no definite information.

At first Pete determined to attack the Indian as he came with his food, but the man never appeared. The only evidence that he had been around was the food Pete found generally in the early morning in the little back room.

When Smith and his Mormon and Apache associates had gone to the distant properties, the Indian's visits to Pete's cave were less frequent, but he had never yet suffered from lack of food. The supply left was sufficient to last for a week or two, or was only enough for a day. When the larger supply was left, Pete knew he was not to look for more until what had been left was consumed. He was so confident that his captors intended to give him enough to eat that he never took the precaution of putting himself on short rations.

On the occasion of the last journey of Smith and a few of his people, when they took the two Gordons with them to make a report on some of their properties, and the subsequent journey of the rest of the men, Pete could tell from the quantity of food left that they had all gone off again. He had now nearly reached his last rations, but was not yet suffering from hunger. As to the supply of water, there was, as has already been mentioned, a good spring on the small

level tract in front of the cave house on which Pete spent nearly all the hours of the day when the sun was shining.

Pete entertained very revengeful feelings toward Joseph Smith. He had sworn again and again to get even with him when the first chance presented itself, a fact by the way that would seem to reduce greatly Joseph Smith's chances for a long life. Like most cowboys of the great Southwest, Pete was quick on the trigger, and was not apt to change his mind when, as he expressed it, "he had set it on anything."

With the exception of the small quantity of food Bill had brought with him in the pack he carried over his shoulder, he and Happy had not eaten anything since their escape from the Pueblo village. The little remaining food had all been eaten on their way to the ruins of the cliff village, so they were both hungry. When they saw the six Pueblos following the solitary Indian they determined to go back to the cave as quickly as possible to get something to eat.

"Could ye eat a nice little steak from thet ere kid I shot, Hap, ef we built a fire and roasted it?" inquired Bill as they were returning rapidly to the cave.

"Watch me and see," said Happy, laughing. "Let's hurry back and start a fire. We'll take the risk of the Pueblos seeing the smoke. I don't think there'll be much danger of this for some time to come, do you?"

"Nary a risk," replied Bill.

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They had passed through the tunneling leading directly to the front of the cave. Each had lighted a branch of the estrana, so that they had no difficulty in seeing around them. When they reached the back of the cave, Bill suddenly stopped, having stumbled against something lying on the floor.

"Hello, what's this, Hap?" he exclaimed.

Bill was pointing to a large package, tightly tied together, lying on the floor.

"Looks like food. Let's open it and see."

They found that it contained various kinds of foodstuffs, mainly such as are sold by stores in mining towns to miners and prospectors. There were packages of flour, baking soda, Indian meal, lard, and other articles that are now so common in the West where they have been sent by enterprising dealers from Chicago, St. Louis, and elsewhere.

"How do ye allow it got here, Hap?" inquired Bill.

"It was probably thrown here by the Indian the Pueblos shot at. As you see, it is in the back of the cave. I'm certain it was not here when we came in the first time. I don't think you would have failed to see it, and I'm quite sure I would not."

"I reckon ye air right, Hap. But what do ye suppose the Indian feller is bringin' food here fer?"

"Perhaps he intended to remain here for a time," replied Happy.

"Thet might be, Hap, but it also 'pears like ez ef he hed been sent to bring food here to somebody who is sick or a prisoner."

A more careful investigation of the package showed that it contained enough food to keep one alive for a week or more. Moreover, the articles were in excellent condition.

"I reckon we'll keep it, Hap?" said Bill.

Even a hurried examination of the ruins showed that many of the houses had been recently occupied. At one place they found the ashes of a recently kindled fire. Near it were several axes of Eastern manufacture that had evidently been employed in cutting wood for kindling. They soon kindled a fire and toasted several excellent steaks from the kid by holding them in a cleft stick over the glowing embers. The steaks had indeed a most pleasant taste, as had also some griddle cakes Bill made in a pan that had been left with other cooking utensils.

There was still some water in their water-bottles, so that they did not then feel in want of this very important article.

After dining they began to explore the ruins. It will be remembered that there were two cylindrical towers located at the two ends of the precipice in front of the cave. The masonry of the towers was more carefully constructed than that of the other buildings. Indeed, the stones of the outer walls, for the towers were formed of three parallel courses of masonry, seemed to have been hewn and fitted by the stone axes that were used at the early time when the towers were erected. Happy and Bill climbed to the top of one of them. Its upper story had only partly

crumbled away, so that they managed to reach a height equal to its highest point when the village was inhabited.

Happy at once noticed that from the top of this tower another tower could be seen further down the cañon.

"I wonder, Bill," he inquired, "if the people used these places to signal to other villages? What do you think?"

"Thet be a good idee, Hap," said Bill approvingly.

"I reckon ye be right. Let's climb the other tower and see ef we kin see another further up the stream."

When this was done it seemed at first as if they were wrong, for no other tower could be seen. Looking more carefully, however, they saw the ruins of a tower that had at first escaped their attention by reason of its reduced height. They therefore came to the conclusion, and we think the correct one, that the towers were not only used as vantage grounds from which to fight enemies attacking them, but especially as signal towers to warn the people up and down the cañon of an unexpected approach of an enemy.

Bill and Happy spent some time in looking over the ruins. One of the things that first attracted their attention was a passageway, uninterrupted by cross walls, that extended directly through the middle of the village. This was different from most of the other passageways, that were shut off either by strong walls built across them, or by walls pierced by narrow doorways.

Some of the houses had rooms that were not only larger than others, but had walls that were covered with yellow plaster. It was evident that these houses were intended for use by their chiefs, or medicine men, or for some of the more important families of the tribe.

Anxiously examining the character of the space below the surface at the foot of the right-hand tower, from which, while on the opposite side of the cañon, they had seen the slender columns of smoke issuing, they found an estufa, or a circular underground room, provided for the medicine men. The room had evidently been entered originally from above, but the roof had long ago fallen in, leaving a fairly comfortable place where the men could sit and smoke, and yet sufficiently below the surface to prevent their being seen from any one on the other side of the cañon.

The rooms that had apparently been recently occupied by the Mormons and Indians showed that they expected to return, for they had left many objects, and among them a number of fairly modern revolvers and rifles. But what pleased Bill and Happy the most was not a number of bottles containing what the Indians call fire-water but a good supply of ammunition, especially of loaded shells.

"Looks as ef they might fit our revolvers, Hap," said Bill.

This proved true, greatly to their surprise, since their weapons were of recent manufacture. Bill was probably correct when he said:

"I reckon, Hap, these shells be intended for Joe

Smith, who kin afford to buy the best guns that be fer sale in the stores at the minin' camps."

While examining one of the small rooms situated at the rear of the living-rooms at the front of the houses, they found the dried bodies of several of the people who had lived here so many generations ago. These mummies, for that is what they were, had been placed in a sitting posture, not however with their faces turned toward the east, as is common in most prehistoric races, but apparently in any direction as may have pleased the party conducting their burial.

One thing that especially astonished them was the manner in which, in many cases, the rooms back of the main room were connected with one another by means of entrances, so low that it was necessary to crawl in order to enter them. All these rooms were furnished with peep-holes near the tops, as they had seen again and again. It surprised them to find that in some cases there were as many as four or five additional rooms connected, one after another, with the main room, and that not infrequently the additional rooms communicated with an inner room large enough to hold a great many people. The extra rooms, farther back in the soft rock, had evidently been provided for a refuge. It is interesting too, to note that at least in one case the larger room in the rear was connected with a smaller one in which had been stored a quantity of dried maize or Indian corn.

"It's old and tough," said Bill, "yit a feller might eat it ef he wuz druy to it."

But the most interesting of all the explorations were those of the underground galleries or tunnels. These Happy was especially anxious to follow. Every now and then the gallery branched so that it was difficult to determine which one to choose.

On one occasion while making these explorations, Happy had unconsciously gotten far ahead of Bill and had come to one of the branchings. Keeping in the gallery which as nearly as he could determine extended directly toward the north, he went ahead and, without knowing it, became completely separated from his companion. Even when he discovered that he had left Bill behind, he was not worried, since, as he said to himself:

"A fellow like Bill will have no trouble in tracking me wherever I go," for each of them had lighted an estrana.

The gallery Happy had been following was shut off in several places by wooden doors that were bolted or barred on the side from which he had been coming. He had, therefore, no difficulty in opening them and proceeding on his way. At last he came to what at first seemed to be the end of the gallery. Near the floor he found, as he had expected to find, a narrow opening through which he did not hesitate to crawl until he found himself in a dark room. Immediately opposite to where he had entered there was another opening which led into another room, and from this still another opening leading into a third room. From this last room, looking through a peep-

hole, by standing on a place cut for the purpose, he could see a cowboy lying on a bed of spruce branches in a well-lighted room. This man was Pete, for Happy had succeeded in finding the cave in which the cowboy guide of Robert Harold Gordon, Jr., had been imprisoned by Joseph Smith.

Purposely making a noise so as to attract the man's attention, Happy cried:

"I'm coming into the room, stranger. You needn't be afraid. I'm a friend."

The man at once sprang to his feet and stood near the opening through which Happy was crawling with his lighted estrana in his hand.

"Whar did ye come from, kid?" exclaimed the man.

"From a number of galleries that lead through the soft rock back of this place from a cliff village."

"Kin ye let me out of this blooming place?" inquired the man eagerly.

"I not only can but will," was the reply.

"Then ye be a friend indeed," said Pete, grasping him eagerly by the hand.

As they began to relate their experiences footsteps were heard, and soon Colorado Bill crawled into the room through the narrow opening.

"Ye scared me that time, Hap," he said. "I feared ye'd git lost in them blamed crooked tunnelings." And then suddenly turning to the man, whom he recognized, he cried:

"Hello, Pete! I be rale glad to see ye. Thought ye

were dead long ago. What hev ye been doin' all this time?"

"Been lying in this house a'most eatin' my heart out fer fear I should fergit what I owed Joe Smith fer keepin' me here."

"Wall," replied Bill with a grin, "I reckon ye kin remember thet; but now tell me how ye got into this place."

They then began to relate their many adventures. It seemed very odd to both Happy and Bill that they should have come in this manner to the relief of a man who had been the guide of the younger Gordon. While Pete, on his part, could scarcely credit the statement that the lad who had first found him in his cave prison, was one of a party from the far East who came solely for the purpose of finding the two mining engineers. When he learned that Happy and Bill had just escaped from six Pueblo Indians, and that as soon as they could safely do so they intended to follow Joseph Smith and his white captives, he said:

"I'll go with ye, Bill. I'm bound to meet thet feller Joe Smith, and I'm also bound to free the white gentleman I guided to this country."

CHAPTER XIV

On the Tracks of Joseph Smith and the Gordons

We must now return to the combined parties of Engleman and Blank in their pursuit of Joseph Smith and his white prisoners. Under the guidance of Awake-in-the-Night, they had no difficulty in picking up the trail and rapidly following it toward the northwest, through western Colorado, across several branches of the Grand River, the principal tributary of the Colorado. They were now close to the eastern boundary of Utah.

They had been traveling through a part of what is known to geologists as the Plateau Region. Although, generally speaking, it possesses a sufficiently uniform surface properly to rank as a plateau, or high plain, yet its surface is far from being uniformly level. On the contrary, it is crossed by numerous detached mountains, isolated buttes, and mesas. The upper portions of both buttes and mesas still retain the general level the original plateau had before it had been cut and sculptured by rains and other atmospheric agencies.

From the drainage of the plateau, which is effected almost entirely by the Colorado River system, it can be seen that the land slopes toward the main river channel; that is, generally toward the south and west.

The Plateau Region extends through much of the western part of Colorado, through all of Utah, except the northwestern part, and through much of New Mexico and Arizona. In some places its separation from the surrounding country is sharply marked, since on the southeast the channel of the Rio Grande forms its boundary. In other regions it requires much study to determine just where the plateau ends and the surrounding district begins. (See Appendix B, "The Plateau Region.")

The remains of many extinct volcanoes are found on the borders of the Plateau Region, while in some parts of the district molten rock had been forced up from beneath the surface through vast fissures and, hardening in them, had formed the well-known dikes. In other places it had flowed over parts of the surface, which it had covered with level beds of basalt.

While the pursuers had no difficulty in finding and following the tracks of Smith and his companions, yet they had not been able to get near enough to see them. Indeed, it almost seemed as though Smith and his party were actually playing with them; as if they wished to show how easy it was to keep just beyond their reach. They ascribed this failure to various causes. It was, they declared, due to the fact that the pursued had better horses, or because of their more intimate acquaintance with the character of the country through which they were passing.

Indeed, the latter might well have been the principal reason had it not been for the fact that Awake-in-

the-Night was probably as well acquainted with the country as Joseph Smith or any of his associates. But whatever was the true cause, this much was certain, they had not been able to overtake those they were pursuing, and the prospects of their doing so very soon were not encouraging. They were disappointed; but probably the two who felt it most were Petromelinski and Blank.

"Blank," said the Russian detective on the day they had crossed the Colorado boundary and passed into Utah, "I don't think much of the manner in which we have been carrying on this pursuit. Joe Smith has beaten us so badly that we have been unable even to get a glimpse of him. If this keeps up I fear he will not only escape and the two Gordons remain in captivity, but that Mashinsky will also get off."

"That's the way I've been squaring it, Ivan," said Blank. "But what would you suggest?" He knew his friend well enough to feel sure he would not have made so severe a criticism had he not some definite plan to propose.

"We should give up trying to reach the fellows by following them and try something else."

"And what is this something else, Ivan?" inquired Blank eagerly.

"That we try to find out as nearly as possible where the gold mines are that Smith wishes to sell, and who the Eastern parties are he is expecting to meet."

"And how do vou think we can best do this?" inquired Blank.

"Instead of following the trail that Awake-in-the-Night has picked up, I propose that we leave Engleman and his party, go to the mining camps in the neighborhood, and tell the miners that two white men are being carried away by the Mormons and forced to work without pay in the examination of their mining interests. If this fact were generally known I feel sure Joe Smith's game would soon be spoiled, so that he would either be obliged to give up the Gordons or leave this section of country. While at the camps we may learn something about the location of Smith's properties and who the Eastern men are to whom he hopes to sell."

"Your plan is splendid, Ivan!" cried Blank enthusiastically. "Suppose we talk to Awake-in-the-Night and see what else he can tell us about the mining claims, then we shall know better what part of the country to beat up to put the mining men on the lookout."

"You don't think the Indian will know the names of the men who were coming here, do you, Blank?" inquired Ivan.

"He is not likely to."

"I don't have to tell you, Blank," said Petromelinski, "that neither you nor I can afford to let that rascal Mashinsky escape the halter. We must run him in."

Blank made no reply to this, but from the expression on his face it was evident that he agreed. He simply said in a grim tone:

"Let's inform Professor Engleman and Mr. Christian about our plan. We must be careful how we break it to them or they will think we intend deserting them."

It indeed greatly surprised them when Blank approached them on the subject.

"Gentlemen," said he, "Ivan and I have been talking the matter over, and have figured it out that we can help you better if we leave you now and look after your friends and Mashinsky on our own hook."

"I fear, Blank," said Petromelinski, "the gentlemen will think that we are deserting them. Now, of course, neither you nor I have such intentions. Let me explain more fully."

"Your proposed action certainly needs an explanation, gentlemen," said Professor Engleman. "Our party is now far from large. Indeed, as you know, it is much smaller than the party ahead of us. We are certain that in it are the men we came from the East to rescue. Moreover, there is a criminal with them whom you are in duty bound to arrest. Now, how this can be accomplished better by your leaving us I must confess I am unable to understand."

"If we were not sure we would have a better chance of success in following our plan, I trust you will believe that we would not leave you," said Petromelinski. "I'm sure we can make it plain to you."

The detectives explained so fully and clearly the plans they had in mind, that before long it became clear to both Engleman and Christian that their con-

templated action was advisable; that if well carried out there was a reasonable probability of accomplishing all they hoped to do.

Next day the party separated. Petromelinski, Blank, and Francksen, together with Fred, who had returned with the guides after leaving Blavinski with Metchiniskoff at the railroad station, left the others and struck across the country toward the west, while the rest of the party, together with Sam Lung and the man they had engaged to take Bill's place in his absence, continued on their way to the northwest.

The decrease in the number of his party was so great that Engleman determined that, although they would continue the pursuit of Joseph Smith, yet they would make no attempt then to rescue the prisoners; they would merely endeavor to keep near them and await developments. At the same time they determined to do what Petromelinski and his companion were to do; i. e., to leave at all the mining towns and camps they visited a full description of the men they were following and the prisoners they were taking with them.

It must not be supposed that because no mention has been made in the preceding chapters of geology and mineralogy that our friends had lost their interest in these studies. On the contrary, the men frequently explained to the boys the many interesting things they were constantly passing. There are probably few regions in the great Southwest where so much can be learned in this direction as in the great Plateau Region.

Although the greater portion of the surface was almost entirely free from vegetation, so that the coloration due to vegetable life was lacking, yet to some extent this was more than made up for by the different colors of the surface rocks or soils; for here iron and other mineral substances, under the influence of atmospheric agencies, had painted the surface with hues of reds, browns, blues, purples, and yellows, with an especial preponderance of yellows.

The country lent itself wonderfully in many places to the study of geology. Instead of the upper strata only being visible, as in most districts, when the strata are thrown down over one another in nearly horizontal layers, as they are here the rivers, and in places even the smaller streams, had cut deep gullies through the strata so that a number of the exposed strata could be readily studied.

In many places the strata were exceedingly rich in the fossil remains of the flora and fauna that lived on the lands and in the waters that formed portions of the surface rocks. It was, indeed, a great opportunity for the boys to learn something about paleontology, or the science of ancient animal and plant life; a subject with which both Engleman and Christian were thoroughly familiar.

Norman had taken great interest in this branch of geology, and as for Rob, his inherited abilities came out each day more and more prominently.

But with all their interest in the wonderful things around them, the boys greatly missed Happy. They

feared he had been killed or would be held so securely as a prisoner that he would never return. As for Rob, he also mourned their failure to rescue his grandfather and father.

Seeing that Norman was grieving over Happy, his uncle endeavored to console him by saying:

"I don't think you need worry about Happy? He is fully able to care for himself. You may rest assured he will manage somehow or other to make his escape. Don't forget too, that Bill has gone after him. Bill, as you know, is an unusually able man for this kind of work. And then too," he added, "you and Robert must not forget that Bill loves Happy quite as much as any of us do, and will leave nothing undone to bring him back to us."

Awake-in-the-Night, who had been listening to the above conversation, turning to Rob said:

"Don't worry, young medicine man; Smile-on-his-Face bright and quick. Can take care of himself. Awake-in-the-Night believes Smile-on-his-Face was taken by Pueblos to make a medicine man of him. They no hurt but be heap kind to him."

The comfortable way in which mineralogy and geology could be studied, as it were hand in hand, delighted the boys. They had now become so familiar with the characteristic appearance of what is known as the country or surface rocks, that they were able to distinguish almost at a glance the differences between marls, sandstones, conglomerates, and limestones, and

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were able to distinguish them from the dark-colored rocks, the basalts, with which they were constantly meeting as they rode over the surface. Then, when they approached the main rivers, they had an opportunity for seeing the wonderful exposures that had been made in the great cañons or gorges that had been cut through the thousands of feet of the surface rocks, during the hundreds of thousands of years the rivers had been flowing through that region.

Mesas and buttes were objects that could not fail to attract their attention. These varied greatly in color and size. The low mesas were generally dry and devoid of vegetation. The higher ones were frequently provided with a green vegetable covering. In some places, along the smaller streams, there were to be seen fringes of vegetation they had all learned to recognize as willows and box elders, with here and there small groves of cotton-woods.

One characteristic of portions of the country that interested them was the different condition of the loose soils, or sands, formed by the disintegration or wearing away of the various surface rocks. In some places these consisted of loose ashes; in others, where the rocks had been formed of colored marls, or loosely compacted sandstones, they had been broken up by the atmosphere into sands that, carried by the winds, had been piled up in drifts. In places the differently colored sands were mixed together, producing a somewhat subdued coloration, yet frequently their difference in specific gravities had enabled the

winds so to sort out the colors, that patches of beautiful golden, vermilion, yellow, brown, and white sands were to be seen arranged in successive stripes, that looked as if nature had been weaving, on a grand scale, a huge fabric, with the shifting colored sands instead of wool for warp and weft.

When the rock was a conglomerate, there were to be found beautiful specimens of highly colored agates, carnelian, jaspers, onyx, sardonyx, and chalcedony pebbles, that had been polished by the action of the air forming a kind of sandblast that made them so attractive that the boys were constantly obliged to throw away specimens they had already collected, in order to be able to carry others that seemed to them to be more beautiful.

In addition to the above minerals, they obtained both here and elsewhere specimens of both common and precious opals of various colors, and also garnets.

In passing through such a country, it would be impossible for any one to fail to learn a great deal, but in the case of brainy boys, who had with them men who were both able and willing to explain the wonders that surrounded them, it was a great opportunity for instruction in those branches.

On leaving Engleman and his party, Petromelinsky and Blank visited the different mining towns in the neighborhood, leaving at each place full information concerning Smith and his companions. The fact that two white men were being carried away by Mormons,

who were not overmuch liked by the Gentiles, promised to make matters interesting for Smith if he should appear with his prisoners.

But what made the information the men brought the more interesting to perhaps most of the miners, was the description they gave of the fugitive criminal, Mashinsky, and the offer by Blank of a reward of one thousand dollars for his arrest. He had no hesitation in doing this, since Blavinski had not only left with him a large sum for expenses, but had also authorized him to draw on him for any additional funds that might be needed.

At first they had but little hope of being able to locate the claims of Smith, but at last they were fortunate in meeting an Eastern prospector who had had some business with the Mormons. He told them he understood that Smith had two gold prospects situated about fifty miles north of the junction of the Green and the Grand Rivers, that he was expecting to sell them to two Eastern men who he believed were due there in a day or two.

When Petromelinski and his companions received this information they immediately headed for the neighborhood.

CHAPTER XV

An Adventure of Rob and Norman in the Bad Lands

In certain portions of the country over which they had recently been passing, were extended districts covered by deposits that had been thrown down from the waters of the great lakes that long ago had covered them. In these arid districts these loosely compacted soils had assumed, under the combined action of the rains and the atmosphere, exceedingly irregular surfaces that in some places were very difficult if not almost impossible to cross.

One day they had been passing over a region in which these irregularities of the surface greatly retarded their progress. Their water-bottles were empty and they were beginning to suffer from thirst. They were therefore much pleased when Awake-in-the-Night, pointing to a fringe of cotton-woods on an arroyo about half a mile distant, said:

"Find water there. Not good water, but water to drink."

When they reached the arroyo they found a pool of a slightly alkaline water that was however better than nothing.

Turning to Professor Engleman, Awake-in-the-Night inquired while pointing to the place:

"Camp here, or make dry camp farther on?"

The Indian meant that this was the last water pool they could reach before the setting of the sun. If they went farther it would be necessary to carry from this pool all the water needed for their horses as well as for their own use. They decided, therefore, to camp by the pool.

While the boys were attending to their mounts, Rob exclaimed:

"Of all the miserable regions through which we have passed, this certainly beats them all. What kind of country do you call this, anyhow?" he inquired of Awake-in-the-Night, who was attending to the other horses.

"Awake-in-the-Night call it Bad Lands. Heap bad lands."

"What does he mean by bad lands, Rob?" inquired Norman. "Does he mean lands that are bad for traveling over, or lands that are bad for vegetation?"

"You certainly could not have been thinking much when you asked that first question, Norman. Can't you see without asking that these lands must be bad for traveling? If your mount is as tired as mine seems to be, and your legs had received as many blows from stumbling as his, you would not need to be told that these lands are called bad lands because they are so wretched for traveling over. As for your other question, whether these lands are bad for vegetation, can you not see that the soil must be very poor since most of the country is a desert?"

Norman turned to the Indian and asked:

"What makes the lands so bad, Awake-in-the-Night?"

"Spirits of the dead say to white people, 'Don't come here. Leave us alone.' White people come. Spirits angry and make lands bad."

Professor Engleman and Christian, who had overheard Rob's remarks, began smiling, and Engleman said to Christian:

"Show the lad where he was wrong about the Bad Lands being necessarily bad lands for vegetation, John."

"I will, Joe," he replied, and then turning to Rob he said:

"My lad, the statement you made to Norman in regard to vegetation was incorrect. As you probably know, there are four conditions necessary for vigorous vegetable growth: the proper soil, and an abundance of light, heat, and moisture. Now there is certainly plenty of light and heat here. The soil too is excellent. The one thing lacking is water. If, therefore, these lands could be irrigated they would not be bad for vegetation. When the land is sufficiently level to be irrigated it is capable of raising wonderful crops. Of course, you understand," he added, "that it would be impossible to get water to flow naturally over surfaces so irregular as those you see around you. To do this the water would have to break through the habit of only flowing over nearly level surfaces and not running up hill unless forced to do so."

"I spoke without thinking," said Rob. "I know that most of the soil in this part of the country will raise good crops if it gets sufficient water, at least, provided there is not too much alkali in it. I have not forgotten," he added, "the wonderful crops we saw in the irrigation districts, while crossing the Colorado Desert. I suppose," he added, "a little alkali improves the soil, does it not?"

"It does," was the reply; "but when present beyond a certain amount it is very injurious to a soil. If, however, the water is permitted to continue to flow long enough over alkali soils, in irrigated districts, most of the alkali is washed out, and the remaining soil is then capable of raising splendid crops."

"Is it known, Mr. Christian," inquired Norman, "what it is that makes the Bad Lands?"

"What kind of bad lands do you mean, Norman?" inquired Mr. Christian.

"Do you mean by that, sir, that there is more than one kind?"

"Oh, yes," was the reply. "There are a great variety of bad lands, though I think for our present purposes we can arrange them in two classes only; i. e., the Bad Bad Lands and the Good Bad Lands."

"And which, sir," inquired Rob, laughing, "are the lands around us? But I need not ask that," he continued, "since any one can see that they must be the Bad Bad Lands. I hardly think the worst lands imaginable could go ahead of these in this place."

"I grant you, my lad, that the lands here certainly

do look pretty bad, and yet I am sorry to say that you are again mistaken. The lands here are often known as the Good Bad Lands, in order to distinguish them from those lying farther to the north that are known as Bad Bad Lands."

What the boys had heard so greatly astonished them that they were silent for some time. Their friends, being sensible men, also kept silent to permit what had been heard to sink in as it were.

The boys were evidently examining the surrounding country and making careful mental note of the peculiarities of the Bad Lands that had merited, when compared with lands situated elsewhere, the somewhat doubtful title of the Good Bad Lands. Clearly, this doubtful goodness could not arise from the surface being fairly level, for here it was cut and gullied in such an extremely irregular manner that, supposing they pitched their tents in the place on which they were standing, it would be difficult even to find a sufficiently extended smooth surface over which to throw their blankets for comfortable beds. The surface was covered by little mounds, so crowded together that there was hardly room to step between them, while their summits were formed of such crumbling material that if one attempted to step from hilltop to hilltop the loose soil would so crumble that he would be unable to keep his footing. Occasionally there were stretches of fairly level country, over which the differently colored sands had been strewn by the winds and arranged in parallel patches like the great and

many-colored sand blanket before referred to. When lighted in many places by the hot, glowing sun, a mass of wonderful coloration appeared.

Norman was evidently looking at the landscape from an artistic and not from the utilitarian standpoint from which Rob was regarding it; for, without addressing his remarks to any one especially, he said:

"The Bad Lands may be difficult to cross, but they are very beautiful in appearance. Look at the magnificent colors. The little mounds there glow as if they were formed of pure gold."

"They may be pretty to look at, Norman," said Rob, but I think you'll find them a very hot place to cross."

"You are at least right there, Rob," said Professor Engleman. "This is a very hot place. I once heard a distinguished naturalist, in speaking about these particular Bad Lands, say that the air is so hot that the temperature is 120° F. in the shade, with, however, no shade."

At the request of the boys, Professor Engleman explained briefly how, when the surface rock consisted of unconsolidated lake deposits, the combined action of the occasional rains as they ran rapidly off the surface, together with the slower action of the atmosphere, leave the sands and clays in all kinds of irregularities, varying, as in the place in which they were standing, from rounded knobs resembling closely placed potato hills to the more extended buttes and mesas.

"In the case of the mesas you see far to our northeast," he added, "the surface has been worn into

shapes resembling castles or ruined cities, on an exceedingly grand scale. It is these lands that are known as the Bad Lands, or, as they were originally called by a French name, *Mauvaises Terres*.

"The Bad Lands," continued Professor Engleman, "are generally worse to the north, in Wyoming, although here, south of the Uinta Mountains, they are certainly bad enough. It was in this district," he added, "that General Hughes describes a mesa, the outlines of which so closely resembled the ruins of a city that he named the place the Goblin City." (See Appendix C, "Bad Lands.")

The boys attended personally to their mounts. The rest of the horses were still being looked after. Professor Engleman and Mr. Christian were sitting on their blankets talking, and Sam Lung, the Chinese cook, was preparing supper. Feeling like taking a walk, Rob and Norman asked permission to examine a small butte of an exceedingly fantastic shape about half a mile to their left.

"There is no objection," said the professor, "only don't go too far and be sure you are back in time for supper—say an hour and a half from now. Of course," he said, "you understand how dangerous it might be to get lost in the Bad Lands. If you are careful, however, there should be no danger."

Neither of the gentlemen believed in putting too many restrictions on the boys who had been placed under their care. They did not think, therefore, there

was any danger in permitting them to go off to study the butte more closely.

The boys had intended to go directly toward the distant butte, but a curious coloration of the surface near them led them to change the direction, and while it is true that the butte formed no inconspicuous object in the landscape, yet when they passed hillock after hillock it was soon completely lost sight of.

They saw so much to interest them that they finally gave up all idea of examining the butte, and kept wandering from place to place for fully three-quarters of an hour, when Rob, looking at his watch, said:

"We had better be getting back to camp, Norman. Our time is nearly up."

"All right," replied Norman, "but let us first look at that curious place over there, where it looks as if some one had been building a long, black wall."

"Why, that's only a dike of basalt, Norman. We have often seen dikes before. What do you see curious about it?"

"It is not the wall I wish to examine, Rob, but the queer-looking rock beyond it."

"It does look odd for a fact," said Rob. "Well, we'll go look at it and then hurry back to camp."

As is often the case with such things, when they came to look more closely at the place on the other side of the dike, they found nothing at all in it that surprised them. It was merely some curious effect produced by colored shadows.

In order to make up for lost time they started off

nearly on a run, but somehow or other the country around them had a different appearance from anything they remembered seeing.

"I don't understand this, Norman," said Rob, pointing to a place where the surface was covered with the same rounded hills through which they had been passing, but now of different sizes and differently grouped. "Do you remember any hills like these?"

"I am certain I have not seen them before," was the reply.

"Then I'm afraid we have lost our way," said Rob. "All we have to do then is to look for our tracks and follow them back to camp."

But it was easier to say this than to do it. Although both boys had now some little experience in picking up the tracks of others, they were unable to find those they had made themselves. Without becoming unnecessarily alarmed they kept searching for them, at the same time directing a somewhat anxious look occasionally to the sun that was now getting dangerously near the horizon.

While doing this Rob became greatly excited at something he saw in the west; for, suddenly falling on his face, he cried to Norman:

"Lie down flat, Norman, so you will not be seen."
Norman did so, but at the same time saying in a sur-

prised tone:

"What do you see, Rob?"

Rob simply pointed with his hand to the west. Looking in this direction, Norman saw about half a

mile from where they were lying, a number of mounted men rapidly riding in single file, and apparently toward the north.

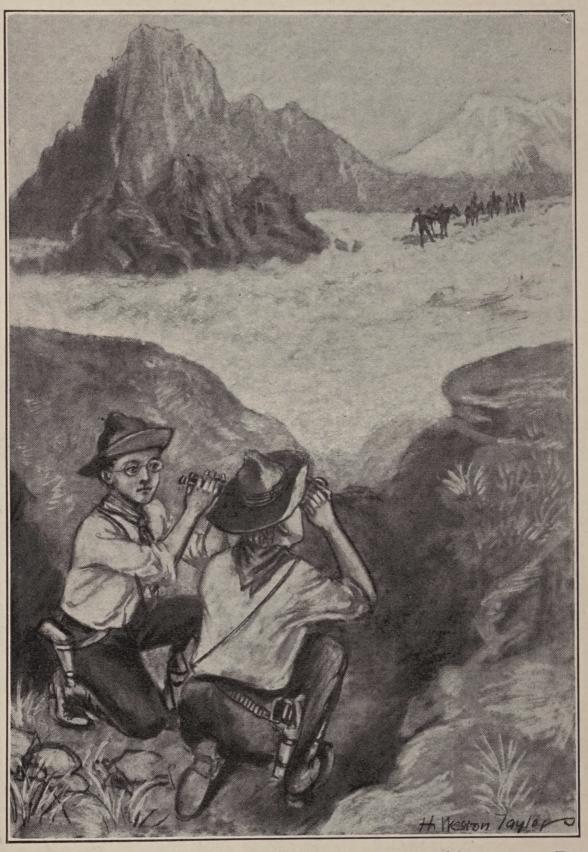
"They are not coming in our direction, Rob," exclaimed Norman, "are they?"

"No; they are going in another direction," was the reply.

They had their glasses with them, and continued looking at the procession of rapidly moving men.

"They're Indians!" cried Norman.

- "Most of them are, but look at the two near the end of the line," Rob said in so curious a tone that Norman took his eyes from his glasses and fixed them on Rob.
 - "What excites you so, Rob?" he inquired.
- "Look at those two white men. Do you think they are Mormons?"
- "I do not," was the reply, "though I think the white men near the head of the line are. But what is the matter, Rob," he inquired, turning his glasses toward the white men near the rear. "Do you think you recognize them, Rob?"
- "I can distinctly recognize one of them as my father," was the reply. "I think the other is my grandfather, but I am not quite certain. If it is, his hair has whitened considerably since I last saw him."
- "What will we do, Rob?" inquired Norman. "Of course, we can't follow them,"
- "Certainly not," was the reply, "that would be foolish. There are at least thirty men in that crowd."



"'Look at those two white men. Do you think they are Mormons?'"
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"Then let us get back to camp as soon as we can and tell what we have seen."

"We will try to get back as soon as possible, but don't forget we have lost our way. Of course, we must remain hiding here until they have passed out of sight, or some of them will come back and take us prisoners."

"Doesn't your father look well, Rob?" inquired Norman, while he was looking at him through the glasses.

"He certainly does," was the reply. "Hello," he continued, "did you see that, Norman? I wonder if anything has happened to father," for at this moment the younger of the white men stopped as if to fix something about his horse; for he had dismounted and was adjusting one of his stirrups.

The others had gone on. When the man was about to remount his horse he threw something on the ground that looked like a letter, and then rapidly mounting, spurred his horse toward the two Indians at the end of the column who had waited for him.

"It looked as if father has purposely dropped a letter for some one to pick up, Norman," exclaimed Rob.

"I think he did, Rob."

The boys continued watching the moving column until it had disappeared, then hurriedly going toward the place they picked up the piece of paper that had been left by the white man.

Opening it, Rob said excitedly:

"See, Norman, this letter is signed Robert Harold Gordon, Jr."

"Let's hear it, Rob," said Norman eagerly. Rob then read the following letter:

I am a white man, a mining engineer from the East. I have been held in captivity for more than a year by a Mormon named Joseph Smith. Another man, my father, also a mining engineer, has been held in captivity for over five years by the same Mormons. Our captors compel us to work on their mining properties without pay. Owing to a serious blow on his head, my father has lost all memory of the past, and is even unable to remember his own name or to recognize me, his son. He retains, however, great ability as a mining engineer, and talks intelligently about anything pertaining to his profession.

For a long time I have been trying to escape with my father, but my captors keep a close watch on us.

There is another captive, a cowboy named Pete, who acted as my guide. He is kept a close prisoner in a lonely cliff house, a half-mile to the north of the ruins of a deserted cliff village in one of the tributary cañons of the Rio Mancos, not far from where it empties into the San Juan.

The writer implores whoever finds this letter to have copies of it posted in the different mining camps and towns throughout Colorado, Utah, Arizona, and New Mexico. Unless he greatly mistakes the character of the white men of these districts, they will see that this kind of slavery is quickly put an end to.

Signed, ROBERT HAROLD GORDON, Jr.

Rob was greatly affected by the signature which he distinctly recognized.

"I am beginning to believe, Norman, that somehow or other, just how I don't know, my father and grandfather will soon be liberated. Let us now see if we can find our way back to the camp.

Had getting back depended on themselves it is a question whether they would have succeeded, for the sun had just sunk below the horizon and the night was rapidly coming on, in the way so characteristic of this part of the country.

As soon as the lads were missed, Awake-in-the-Night had been sent to follow their tracks. He had no difficulty in doing this, and before long found them and returned with them to camp.

Engleman and Christian who had gone to meet them at once observed, from the peculiar expression in Rob's face, that something unusual had occurred.

"I see you have something important to tell us. Let us hear it quickly."

"I have just seen my father and I think my grand-father," said Rob.

"Where?" inquired both men eagerly.

Rob explained what had occurred, handing the letter to Professor Engleman, who at once read it to Christian.

"I recognize the handwriting, Joe," said Christian.
"I have heard of the cowboy, Pete, who was with Robert's father."

There was an eager discussion as to what they would better do under the circumstances.

"How unfortunate it is," said Engleman, "that Petromelinski and Blank are not here. We are now too small a party to think of attacking the men who have gone on ahead; for, in addition to those the boys

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saw, there are probably others who are waiting near the prospects Smith is endeavoring to sell."

"We must do the best we can without Petromelinski or Blank," said Christian.

After much deliberation it was determined that Engleman and Awake-in-the-Night should leave as soon as possible and go back to a mining town they had passed through the day before. In the meanwhile, Christian, with the other Indian guide, would follow after them so as barely to keep them in sight.

Without waiting for the day to break, Engleman left with the Indian for the mining camp, while, shortly after the rising of the sun, Christian and his companions picked up the trail of the party that had been seen by Rob and Norman, and cautiously followed it.

CHAPTER XVI

Petromelinski and Blank as Purchasers of Mining Claims

"I wish a report on these claims as soon as possible. How soon can you let me have it?"

"To make a preliminary report will require two or three days. For a fuller report we must have one or two months, since deep borings must be made with diamond drills, shafts sunk, and specimens of cores sent to assayers."

"A preliminary report will do for the present. Be sure that you make it as favorable as possible."

"It will be a true report and nothing more," was the reply in a cold tone.

The speakers were Joseph Smith and Robert Harold Gordon, Jr. The place was near the mining claims on which the report was desired. The properties were the ones Joseph Smith hoped to sell to the Eastern capitalists.

Smith did not intend permitting the engineers to see the capitalists. He knew that if the parties came together, the younger Gordon would speak about the captivity in which he and his father were held and ask their aid. The Gordons had, therefore, been brought to the properties early each morning, and taken away before sunset, while Indian scouts, placed along the

route by which the men from the East were expected to come, were to bring word should they arrive sooner than had been expected.

There are exceptions to most rules, yet it can generally be assumed that when a Western man, engaged in mining and owning a number of properties, is ready to sell some of them, it is not always the best of his properties that he parts with. On the contrary, those selected for sale are apt to be weak in certain directions, and this whether the properties be mere prospects or actual mines.

As my older readers know, there is a great difference between a prospect and a mine. It may be well, however, for those not informed on such subjects to state briefly in what this difference consists. A prospect is an undeveloped claim, while a mine is a property on which shafts have been sunk, and horizontal galleries or tunnels, known as levels or drifts, extended in both directions along the vein. A property cannot be correctly called a mine until two or more of these levels' have been driven and assays made of average specimens taken throughout, so as to determine the amount of paying ore in sight. When this work is done intelligently and honestly, it is possible to calculate the amount of ore that can be mined, its value, as well as the cost of taking it from the vein, placing it in the mill, and extracting the metal.

It is sometimes incorrectly said that mining, especially gold mining, is a pure gamble; that when one loses money in such an enterprise he only gets what

he deserves. Now, it can be shown that gold mining, when properly carried on, offers, as a rule, less business risks than any regular manufacturing business, and the reason is evident.

In an ordinary manufacturing business the uncertain elements are the cost of the raw materials laid down at the factory, the cost of production, the cost of selling, and the extent and character of the market. These being known, the total costs, and consequently the total profit and loss, is a matter of simple calculation.

Now gold mining, provided it is not the mining of a prospect, but of a true mine in which a definite amount of paying ore has been stoped or marked out, and its average value ascertained by reliable assays, should be far less a matter of chance than almost any ordinary manufacturing business; since the quantity of the ore, the cost of placing it in the mills, and of extracting the metal from it can be closely calculated. As regards the cost of selling, and the extent of the market for the finished product, gold mining possesses advantages over perhaps all other manufacturing products. It has the world for its market, and the price paid for it seldom differs much from twenty dollars per troy ounce.

But the above is true for mines only, not for prospects. Generally speaking, a prospect is but a carefully measured tract extending along the middle of what is known as a vein, for equal distances on each side.

The first step in gold mining is the location of what is known as a prospect. This is done by prospectors, who carefully examine the districts where the ore sought is believed to exist. In prospecting for gold, except in placer mines, it is generally a vein that is sought. When this has been found specimens of the mineral matter filling the vein are taken, and a rough estimate of the amount of gold present is determined.

The most reliable method of sampling ores is by assaying, or chemically analyzing them. This method, however, would be impracticable in the field. Resort, therefore, is had to what is known as panning, a method that, in the hands of an expert, is capable of giving fairly reliable results.

Gold panning is a very simple process. It is only suitable for what are known as free-milling ores; *i. e.*, ores throughout which metallic gold is distributed in minute particles. These particles, being far heavier than fragments of the same size of any of the other of the mineral substances present, can be readily separated by panning.

The process of gold panning is as follows: A metallic pan, with a circular base about fourteen inches in diameter, but wider at the top than at the bottom, provided with sloping sides, is employed. The specimens to be panned, reduced to a powder by grinding in a mortar, are thrown into the pan when rather more than half filled with water. The contents, thoroughly stirred through the water by whirling or shaking the pan, are permitted to settle for a moment. Owing to its

greater density most of the gold falls to the bottom, while the greater bulk of the remaining mineral matter remains floating in the water, and is allowed to escape from one edge of the pan that is slightly lowered for that purpose. When skilfully done, almost none of the gold escapes with the water that flows over the edge of the pan. When most of the worthless suspended matter has thus been disposed of, the pan is again partially filled with water, and the process repeated until nearly all the gold remains, scattered as minute grains throughout a very thin layer of mineral matter at the bottom of the pan. The amount of gold present is estimated by what is known as "colors"; for when held in the bright light the minute particles scatter yellow light in all directions.

To most onlookers gold panning seems to be a very simple process, but the first efforts of a tenderfoot, as the miners call a stranger, are apt to meet with no little ridicule.

After an examination has been made in this way, if it is believed the prospect bids fair to be paying, if it has been located on a vein—especially on what is known as a fissure vein; i. e., a place where a deep crack, or fissure, has been formed in the earth's crust and afterward filled with mineral matter, a mining claim, or one or more mining claims, are laid out along the vein. Under the United States mining laws a claim extends for fifteen hundred feet along the vein and for two hundred and fifty feet on each side of the center. A notice, filed at certain offices located

throughout the West by the United States government, enables one to obtain what is known as a mining claim. Before the land covered by a claim can become the exclusive property of the locator, a certain amount of money must be expended on it in the way of work. This work generally consists in the sinking of shafts and the running of levels.

The mining claims on which the Gordons had been requested to prepare a written report as early as possible, were not regarded by Smith as among the most valuable he owned.

It sometimes happens in gold mining that prospects which are far from promising at the surface increase rapidly in value at a short distance below the surface. This was believed to be the case by the two Gordons with the property in question.

"What do you think, father?" inquired the younger Gordon after the first day's examination of the property. "I have no doubt this is a fissure vein. Although the hanging wall is indistinct, yet the foot wall is clear."

Hanging and foot walls are terms commonly employed for all fissure veins in which the fissures are not vertical but inclined, the foot wall being the lower of the inclined walls of the vein, and the hanging wall the upper wall.

"Entirely correct, sir," replied the father, for he recognized the one speaking as simply another mining engineer.

The two men then entered into an extended conversation. As long as this related to matters of mining the elder man spoke intelligently. As soon as it turned to any other subject, as the son would occasionally do in the vain hope of his father regaining some of his memory, the answers were incoherent.

The two men were able to make a fairly good report of the property. Besides reaching the conclusion that it was a true fissure vein, they found that it contained free-milling ore throughout. Moreover, that it extended in a nearly straight line for a sufficient distance across the country to warrant four mining claims to be filed on it. It was these claims the Gordons were examining and that Smith was offering for sale.

Petromelinski and Blank had lost no time after leaving Engleman and Christian in visiting a mining town in the neighborhood, where they made inquiries as to the exact location of the Smith prospects. This they had succeeded in obtaining, and even learned the names of the two Eastern capitalists.

"It is not enough, Blank," said Petromelinski, "merely to know the names of these men. If we knew their appearance as well, and were better posted as to when they would reach the properties, we might be able to do without the men."

While his friend was talking Blank's face assumed so curious an appearance, that Petromelinski suspected he had recently received some important information, so he said:

"I see you have something up your sleeve, Blank. Let's hear it."

"You're a sharp one all right, Ivan," said Blank in an approving tone. "Well, listen to this," and taking a telegram from his pocket, he said: "I received this only a few moments ago from a prospector who brought it from the mining town we stopped at yesterday."

Blank then read the telegram in which the names of the two men were given, together with a statement that, having been unexpectedly detained, they would not reach the property in Utah until two or three days later than they expected.

"Who sent you that telegram, Blank?" inquired Petromelinski.

"A friend of mine in the Bureau of Police at Chicago. I thought the Eastern men would pass through that city, and wrote asking him to let me know by wire if he heard of two men from the East who were coming to inspect properties in Utah. But I am not through," he added. "Listen to the remainder of the telegram. As you can see," he said, when he had read it, "not only does it give the names of the men, but also a brief description of their appearance. I imagine from what it says that they are about our height and weight, but have light instead of dark hair."

"So they have been detained and will be two or three days late in reaching the properties?" said Petromelinski, more as if talking to himself than to his companion.

"I see, Ivan," said Blank, "you've formed the same plan I have."

"That is very likely," was the reply. "We will disguise ourselves so as to represent the Eastern capitalists. In this way we shall be able to get an interview with Smith, as well as with either one or both of the two Gordons and the fellow Mashinsky. Is that your plan?"

"That's my plan," was the reply.

It was not a difficult matter for the detectives so thoroughly to disguise themselves that it would be difficult to recognize them even by their intimate acquaintances, for both were adepts at this kind of work.

Joseph Smith had already received a telegraphic despatch from the men saying they would be two or three days late. When, therefore, the two so-called Eastern capitalists called on him at the property, he said in a somewhat suspicious tone:

"I thought you were not coming for several days."

"That's right," said Petromelinski, who had immediately come to the correct conclusion respecting the telegram. "I see you have received our telegram. But at the last moment we found it possible to get off, and so we thought we would come on and not keep you waiting."

"I received your telegram all right," was the reply.

"If we have come too soon," said Petromelinski, there is another property not far from here that we

are thinking of examining. We can go there first and be back in a week from now."

But the fact that the assumed miners or capitalists, who for convenience we shall now call by their true names, spoke of having sent a telegram completely removed any suspicion that Smith had concerning them. Then too, the bluff that Petromelinski had made of examining another property in the neighborhood was too much for him, so he said:

"You are not here too soon, gentlemen. The report is ready. I will send for it. I can take you to the property if you are ready to go in a short time."

"How far are we from it?" inquired Blank.

"It is quite near here," was the reply. "Wait a moment, I'll be back and go with you in a few moments."

Now Smith had lied to the two men. He had not gone for the report, but in order to send some of the Indians to take the two engineers from the property in a direction opposite to that in which he would approach with the capitalists.

On his return, Petromelinski and Blank were taken to the property.

"Let us have the report," said Blank.

The two men began reading it over carefully.

"Now show us where the vein outcrops and the places from which the report says the specimens of panned gold were obtained."

"It looks all right," said Petromelinski to Blank, calling him of course by his assumed name, after they

had gone twice over the property and had it explained by Smith. "I rather like it, don't you?"

"It's a splendid chance," said Blank in a low tone, which, however, he took care was loud enough for Smith to hear. "Shall we buy it?" he inquired.

"I think so," replied Petromelinski to his companion. "There's only one thing I'd like to know, whether there will be any difficulty about the payment. Will there?" he said, speaking to Smith in a louder tone, although he was sure that he had already heard all that had been said.

"There will be no trouble about that, gentlemen," was the reply. "You can pay twenty per cent. cash down and the eighty per cent. balance in four payments of twenty per cent. at the end of each three months."

"You don't understand me," protested Petromelinski. "I want to know what discount you will make if all the cash is paid down at once. Of course," he added, "I know the risk I would be taking in paying for the property until we know more about it, but we are willing to take the risk provided you make the discount sufficiently attractive."

"What would you expect?" inquired Smith, delighted at the thought of receiving ready cash; for he did not at all expect the property to show up well, and anticipated that the first payment would be the only one.

"I should say," was the reply, "that considering the risks we take, you ought to be willing to make a discount of twenty per cent."

Smith had expected the man to ask at least forty or fifty per cent. discount, but concealing his satisfaction, he remarked:

"Well, twenty per cent. is rather high, but I'll take it."

"But, then," said Blank, turning to Petromelinski, "we should see the engineers who signed this report, or at least one of them. I want to hear why they think this is a true fissure vein. It's all right on one side, but how about this other side?" And then he added, "I think it likely we'll buy your claims. But your engineers should surely take us along the entire vein and tell us what they know about it."

Although Blank's request was reasonable, it gave Smith much trouble. He desired to make a cash sale of the property, but feared to take the risk of permitting the men to come in contact with the younger Gordon. As for the elder Gordon, he would not for a moment allow him to be seen; for if the conversation should turn on something not connected with mining engineering, the condition of the man's mind would be only too evident, and the value of the report greatly decreased. Turning to Blank he said:

"One of the engineers has left for a distant mine. The other is in the neighborhood. If I can reach him before he gets off I will bring him here," and in a short time he returned with the younger Gordon. He had concluded to take the risk, threatening to kill the elder Gordon should the son make any disclosure to the capitalists. He believed, as was indeed the case, that the

son knew him to be capable of such an action, and therefore in this manner completely sealed his lips.

"Are you the Robert Harold Gordon, Jr., whose name I find attached to this report?" inquired Blank.

"I am," was the reply. "What can I do for you?"

"We have almost determined to buy this property on a cash basis, but before doing so there are certain points I would like more fully explained. Suppose, therefore, we walk over the property and discuss these points together."

"Tell me what you don't understand," was the reply, "and I will do all I can to make it plain to you."

"Suppose we walk along the vein," said Petromelinski, "and I will point out to you what I wish explained."

Joseph Smith closely followed the two men, but he found it impossible to keep two men such as Petromelinski and Blank in the same place where he and his engineer were. Blank constantly insisted on having questions answered concerning points at one part of the vein, while Petromelinski was equally anxious to have the engineer come to explain a difficult point at a distant part of the vein. In this manner Petromelinski at last succeeded in drawing Gordon off to such a distance from Smith that he was able to talk with him, so saying to Gordon in a low tone:

"Try not to look surprised at what I am about to tell you. Your friend, Prof. Joseph Engleman, a mining engineer, is in the neighborhood. Another engi-

neer, John Christian, has come with him from the East to look for you and your father. We're making arrangements to rescue you from this man Smith and his band."

"Thank God," replied Gordon. "Let me know your plans so I can help you."

"Hush!" said Petromelinski, "here comes Smith."

As Joseph Smith approached, Petromelinski began talking to Gordon as if he were continuing the conversation they had when Smith was out of hearing.

"But I don't understand," he said, "how you figure it about the fissure vein at this part of the property. I acknowledge it's all right on the east, but am not satisfied with it on the west."

"And yet," said Gordon, "as I have already told you, there are certain signs here that I'm sure as soon as I show to you will make you agree that this is a true vein."

"Perhaps I can explain my difficulties to you better half a mile from here," said Petromelinski. "There is a place there I would like to show you."

Blank again gave the two men an opportunity to do this by calling Smith's attention to certain phrases in the report. He wanted information as to the parties who held the properties referred to in the report on the east of the properties offered for sale.

"Come with me," said Smith, "I can tell you just as well while we're walking."

"All right," said Blank, "but let me first find in the report the places where these properties are especially

referred to," and by the time this was done Petromelinski and Gordon had another private conversation.

Petromelinski then explained to him the plans he had formed, saying that he hoped to be able, about three days from that time, to bring a band of determined men from the mining town in the neighborhood to rescue both him and his father.

"There will be some difficulty about persuading my father to leave with me," said Gordon anxiously.

"I have heard about that," said Petromelinski.

"Your father is suffering from an injury to his brain and can only talk intelligently on mining matters. Whatever you do, endeavor to remain either on or near the property. I will fix matters with Smith so that he will be obliged to have both of you remain."

The approach of Blank and Smith again stopped the conversation, but Petromelinski had given to Gordon all the information he desired, so, after a private conversation with Blank, he said:

"Your engineer, Mr. Gordon, has made nearly everything satisfactory. We will be back in two or three days, when I think we will be ready to pay for the property. But we wish first to make inquiries at the assay office at which these assays have been made. There is also one additional point about which I wish to consult a mining friend in the camp."

"What is it about?" inquired Smith anxiously.

"It is about the other wall of the vein," was the reply.

"You'll find that all right," remarked Smith.

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Seeing what the assumed Eastern capitalists were trying to do, the younger Gordon said:

"Don't turn the property down by reason of that side of the vein. I am sure if you will let me walk along the entire vein with you I can make it perfectly clear that the property is a true fissure vein."

"Well, then," said Petromelinski, "be here two or three days from now and I'll give you the opportunity you desire. Is that satisfactory?" he inquired, turning to Smith.

"Perfectly," was the reply.

CHAPTER XVII

COLORADO BILL, HAPPY, AND PETE GET BUSY

"I THINK I'll walk around a little, Bill," said Happy, until you and Pete get through whinnying."

"All right," said Bill, grinning. "Ye ain't got enough room to git lost in, onless ye tumble over the rim of the cliff, which I allow ain't likely, or go back into them tunnelings, and even if ye git lost thar I reckon ye'd hev no trouble in finding yerself agin."

Pete had been greatly attracted by Happy, and had told him several times that he never would forget what he owed him for finding him in his out-of-the-way prison. When the lad left he said:

"Thet be a fine kid, Bill. I allow I hev never yet met a youngster thet so drew me like to him as this one. It's not only a'cause he set me free, but there be something about him I can't help liking. Whar did ye pick him up, and how long hev ye known him?"

"I bean't surprised ye like Hap so much, Pete," said Bill, greatly pleased. "I hev known him sence he war a little chap I fust met on a ranch in Texas. Then I lost sight of him ontil I got the job of guiding a party of gentlemen, with two other lads besides Hap, through the Colorado Desert."

"Tell me all about him, Bill," said Pete. "But fust let me know, kin he ride and shoot."

"Kin he!" said Bill, grinning. "Why, Pete, I ain't it with the youngster, and I doubt whether even ye be."

Now, both riding and shooting were things on which Pete especially prided himself. He appeared, however, to be greatly pleased with what Bill told him.

"I'm glad, Bill, to hear ye say that," he said. "Tell me about his shootin'."

"I will," said Bill, and soon he was reciting to the evident delight of his auditor Happy's strong points in this direction.

He appeared to be especially delighted when Bill told him how he tricked Metchiniskoff when that individual held him up.

"Thet sartinly war very slick," he remarked with a broad grin.

Before long Happy came back and said to Pete:

"I have been seeing whether I could reach the stream below from the front of the cave, but I've given it up. Probably you can show me where I can do this."

"I kain't," said Pete, grinning, "onless I could larn ye how to fly; fer the cliff comes up suddent like from below. I hev tried agin and agin to find thet way out of this prison. But I don't believe it kin be done."

"I reckon we hed better be gallopin' back to the cliff village," said Bill. "I be thinkin' of leavin' thar early to-morrer. Let's git off now."

"I reckon, Bill," said Happy, smiling, "that if we wait a half-hour or so longer we won't find the light any stronger in the tunnels than it is now, and since

you say you do not expect leaving the cliff village until to-morrow, I suppose you won't object to giving me half an hour or so to examine the rooms back of the cave."

"Hev yer own way about it, Hap," said Bill, "though what ye kin wish to examine in them rooms is more'n I kin guess."

"You don't care, do you?" inquired Happy, addressing Pete.

"Ye be welcome to look at everything ye kin find in them rooms, but I kin tell ye now ye won't find much, fer I have been over them agin and agin, and I don't believe thar be anything thet I hevn't seen."

Lighting one of the estrana weeds, Happy entered the room immediately back of the one occupied by Pete as his bedroom. Here, as Pete had assured him, there was nothing to be seen except the low opening in the wall opposite the front of the cave. Happy, however, who was not satisfied, began clearing away a pile of loose soil from the wall, on the same side as that at which the spring was located. Here he soon uncovered another low opening.

"Wall, I'll be dod-rotted!" cried Pete. "I never hed the sense to dig under that pile."

"Let me help, Hap," said Bill, greatly pleased at the result.

When the dirt was removed another low opening was revealed. On crawling through this they discovered a flight of stone steps in fairly good condition, leading down to another cliff house situated be-

low the one in which Pete had been so long kept a prisoner. It was a larger house than the upper one. Moreover, a stone trough had been placed so as to catch the water that escaped from the spring above. A careful examination did not result in their finding any communication with the platform in front of the house and the cañon below.

Pete made no effort to conceal his surprise at the existence of such a place and his having failed to discover it.

Before leaving the upper room, or, as Happy called it, "Pete's room," he was careful to fill up the opening leading below, so as to make it difficult for one to see that it existed.

"Ef I didn't know ye better, Hap, I would ask what be ye doin' thet fer? But I reckon ye hev some reason fer it, and thet's enough fer Bill."

Pete was surprised at the length of the tunneling, and of the fact that Happy did not seem to have any difficulty in deciding which of the many branches to follow. In a short time they had reached the ruins of the cliff village. It seemed odd to Happy that Pete did not appear to care about examining the ruins of the building, that had interested him so much.

"I don't kere much," he said, "about sich things," pointing to the ruins. "I reckon I'll come and sit with ye, Bill, and help ye at yer job," for very shortly after reaching the ruins Bill had kindled a fire and was preparing some broiled steak and baking a mixture of

flour, meal, and baking soda in some hot lard in a pan he had found among other things left by the Mormons.

"Ye kin onderstand, Bill," said Pete, "thet naterally I be hungry like, fer I heven't had a squar meal fer some time."

After supper Bill and Pete had a long conversation, Pete being anxious to know Bill's plans.

"I am keen to go with ye, Bill," said Pete, "to help set the gentleman free I was a-guidin' when we war both took. Then agin," he said grimly, "I hanker arter makin' a call on Joe Smith and payin' him what I owe. Ef course ye kin onderstand," he added, "thet the Mormons and Injuns hev stolen all I hed, so I'm down on my luck. Still, ef you'll take me ez I am, I'll only ask fer guns, a mount, and my keep until I kin find payin' work."

"We'll call it a bargain, Pete," said Bill. "I be sure thet ef ye leave it to the gentlemen I be workin' fer they'll treat ye squar."

Before leaving next morning, Bill took Pete to the room in which the weapons had been left by the Mormons and Indians. Here Pete was hugely delighted to find among them the revolver and rifle that had been taken from him by his captors.

"Ef I do say it ez shouldn't," he said, "these be ez good guns ez kin be made. They may not be so good to look at, but Pete knows their good pints and how to shoot with them straight and quick. This," he said, "be my cartridge belt, but it be nearly empty."

"See if them shells won't fit it," exclaimed Bill, showing him where a number of loaded shells had been left.

"They be all right," replied Pete, grinning, as he loaded his revolver with them. "I reckon I'll fill my belt with them and take a few pocketfuls besides. Ef Joe Smith don't like it, I'll be pleased to let him hev a few of them back, at least the lead in 'em," he added grimly.

Nothing occurred to the three as they gained the outer air through the fissure, passed down the cañon, mounted to the other side, and walked toward the northwest.

They stopped at one of the nearest mining towns. Here one of the miners, looking earnestly at Bill, exclaimed:

- "Hello, Bill! glad to see ye agin. I knowed ye war comin'."
 - "How did ye know thet?" inquired Bill.
- "Yer party hez gone ahead; but tell me whar hev ye been? It ain't like the Bill I uster know to leave his party and not even start fer them agin until they be five days ahead. Whar hev ye been?"
- "Been callin' on a friend across the boundary," he said, pointing to the south.
 - "And did ye find yer friend in good health?"
- "Bully," said Bill. "I brung him and another friend with me," pointing to Happy and Pete.
 - "Ye'll be pleased to know thet yer party hez left yer

mounts here for ye, Bill," said his friend. "They asked me to take keer of 'em till ye turned up."

"Thet's the best news I've heerd fer a long time." exclaimed Bill. "We be fixed all right now, Hap, ef we kin only git a mount fer Pete. As ye know, a feller is much hobbled in this country without a mount. He kain't go very fer and he kain't carry much food. I wonder," said Bill, turning to his friend, "ef ye kin tell me whar I kin find a mount fer Pete?"

"I hev one I'll sell ye cheap," was the remark, "and give ye a hull year to pay me in."

"Them terms be very liberal," said Bill, grinning; but thet's just like ye. Ye allus war very liberal like. Wall, we'll call it a bargain," continued Bill, "only I'd ruther pay ye half the cash now."

"Then," said the man in true Western style, "I'll loan thet cash to yer friend. I be flush now, and it'll be more'n likely thet them fellers hev cleaned ye out like."

Pete at first was unwilling to let a stranger lend him money, but when Bill's friend said: "It ain't ez ef I war a stranger. It be Bill thet's loanin' ye this money," he agreed to take it.

Laying in a supply of provisions, the three rode in the direction indicated by Engleman in a letter he had written, explaining in general their movements shortly after leaving the cliff village and Bill.

In due time they reached the first mining town at which Engleman and Awake-in-the-Night had left copies of the younger Gordon's letter. They had then

passed on to the next town in a different direction from that which Happy and his companions had taken. They therefore had failed to meet them.

The letter had been nailed on one of the wooden doorposts of a saloon. A number of men were standing reading the notice and were evidently excited at what they read.

"What be thet, Hap?" inquired Bill as they approached the doorpost.

Happy read the letter aloud. When he reached the sentence, "'I am a white man, a mining engineer from the East, held in captivity for over a year by a Mormon named Joseph Smith," he looked at the signature, and then exclaimed in an excited tone to both Bill and Pete:

"It's signed by Rob's father, Bill. The man you guided, Pete, when you and he were taken prisoners."

"Wall, I be swan, if this bean't a go. But read on, Hap," said Bill excitedly. "I jedge that be more, bean't there?" at which Happy finished reading the letter picked up by Rob and Norman in the Bad Lands.

Seeing that the matter referred to in the posted notice was something the newcomers knew about, the miners crowded around them and said, addressing Pete:

"Tell us all you know about this matter, stranger. Do you know either of these men?" It was a college-educated man who spoke, a type of man not uncommon in the West. "It is about time that outrages of this kind were stopped. Perhaps," he inquired of Bill,

"you can tell us something about the cowboy, Pete, who it is also said in this letter had been captured and held a prisoner by the same parties. We can't be far from the place. If you can point it out to us we will go at once and try to liberate the man."

"I be very much obliged to ye," said Pete, "fer yer kind plans; but these gentlemen," he said, pointing to his friends, "hev been that afore ye. I be the Pete wot is referred to, and I be now on the way to find thet feller Joe Smith to pay him a little of what I owes him."

Pete's intention evidently struck a sympathetic chord with the men around him, and murmurings were heard declaring that when the time came they would only be too well pleased to join Pete in his social call on the Mormons.

"I imagine," said the gentleman who had before been speaking, turning to Happy, "your name is Ralph Earle Clinton."

"It is," said Happy, smiling.

"Then there is a letter for you, which was left by the white man who nailed this notice here."

"But were there no other white people with the gentleman?" inquired Happy anxiously.

"No," was the reply; "his only other companion was an Indian he called Awake-in-the-Night. I think, however," he said, observing Happy's anxiety, "you will find the information you wish in the letter."

Happy opened the letter and, after reading it hurriedly, said to the gentleman:

"You need not go. There is nothing private here. I'd like you to hear all the letter contains."

He then read to Bill and to the others the statement of what had happened; of the conclusion the two detectives had reached of leaving Engleman, Christian, and the rest of the party, and going on to the mining towns explaining all that they knew.

"A sensible conclusion," said the gentleman. "These men have evidently taken a different direction, or else they would have reached this place long ago. However," he added, "it makes but little difference. The information contained in the letter picked up in the Bad Lands is far more complete, and will help no little in insuring the liberation of the captives."

Before leaving, Bill and his party agreed to send the men word as soon as matters had reached a condition in which their aid would be required.

It was the second day after Petromelinski and Blank had left the younger Gordon. They had gone directly to the principal mining town to the northwest of Smith's property, and had, therefore, failed to meet Engleman. Having given to the younger Gordon the necessary information, and having impressed on his mind the importance of seeing that his father remained in the neighborhood, promising to do all they could toward making it to Smith's interest to have both men so remain, Petromelinski, turning to Smith, said:

"We have practically determined to purchase the property. There is only one thing more we wish done.

We believe that the vein extends farther to the north, at least sufficiently far to warrant another claim being made. If you will permit your two engineers to make a report on this extra claim, we will take it out in our names, of course recompensing you and the engineers for services. If you are willing to do this, and will have your engineers in the neighborhood, so that if necessary we can obtain additional information from them, I think you can regard the sale of the property as assured, and we will return in two days to complete the transaction."

Smith agreed to the terms, so the two supposed purchasers hurried off to the mining town in order, as they said, to attend to other important business.

They had no difficulty in obtaining from the miners a promise to be in the neighborhood of the claims twenty-four hours after Petromelinski and Blank left to meet Smith and the Gordons.

The plan was that Gordon should pretend to show his father some peculiarity in the country a mile to the north of the additional claim, and to remain there with him until the approach of the party of miners.

The two detectives had met Joseph Smith and the younger Gordon on the claims. Petromelinski had succeeded in having a short private conversation with the son, from whom he learned that his father was in the neighborhood. Everything was going on satisfactorily when, to the great surprise of the detectives, the Russian, Mashinsky, suddenly was seen running toward Smith, crying:

"Look out for those fellows! They are not capitalists but detectives, one from Russia and the other from the East. The real capitalists are here, and are not pleased to hear that other parties have almost arranged for the purchase of the property."

Seeing they had been discovered, Petromelinski and Blank succeeded in making their escape. Smith swore a great oath at having been so completely fooled, and drawing his revolver sent balls dangerously near the fleeing men. Turning to the true capitalists, who had now come up to him, Smith endeavored to smooth matters over. But he was too late. While passing through the mining towns these men had heard of Smith's conduct, and indignantly refused to have anything to do with either him or his mining claims.

The detectives in escaping ran in the direction in which the miners were advancing. Soon joining them they turned in pursuit of Smith and his fleeing men.

When Smith saw that matters were against him, and being informed by his Indian scouts that a posse of men greatly exceeding his in numbers was rapidly advancing from the mining town, he, turning to one of the Mormons, said:

"Our game is all up here, my men. We must look out for ourselves. These fellows from the mining camp mean business," so taking the two Gordons with them they moved rapidly toward the southeast, it having been determined to seek a refuge in the great Colorado Desert.

"We have at least a good start on them," continued

Smith, "and knowing the country so much better than they should have no trouble in eluding them."

When Blank, Petromelinski, and his mining friends reached the claims they did not hesitate to pursue the fleeing men, but after following them for a day, and finding they were losing ground, the miners returned to their work, with the exception of ten of the more determined men, who agreed to continue the pursuit with Blank's party.

It was fully four days afterward when Awake-in-the-Night and Engleman, followed by another band of miners from a mining town to the southeast, reached the Smith claims. Here Engleman was handed a letter from Christian advising him of what had occurred, and that Petromelinski and Blank had again joined him, and that they were all pursuing Smith and his band, in company with ten recruits picked up in the mining camps. He stated that he believed Smith was again endeavoring to reach the Colorado Desert, and hoped Engleman and his party would join them.

Engleman was puzzled. He was uncertain what was the best thing to do. Fortunately, it was about this time that Colorado Bill, Happy, and Pete approached. After mutual rejoicings at meeting again, they at once began to exchange information concerning the many important events that had happened since they were last together.

"Smith and his party are four days in advance of

us," exclaimed Engleman. "I doubt whether we can catch them. Awake-in-the-Night," he said, turning to the Indian, "can you help us?"

"Awake-in-the-Night heap friend of white men. If white men not afraid to go with Indian through the Jaws of Death, he thinks perhaps he may be able to reach the desert as soon as the other men."

"What do you mean," inquired Engleman, "by the Jaws of Death?"

"He means," said one of the mining men, "he'll show ye the way through the Colorado Cañon ef ye will resk goin' with him. He calls it the Jaws of Death, and I'll be hanged ef he bean't right. It is a risky road."

"As far as I am concerned," said Engleman, "I am willing to take the risk, but I would not ask you," turning to Bill, "nor you, Happy, to go with me."

"Of course I'll go with you, professor," said Happy.

"I be only too glad to go with ye," said Colorado Bill.

"And so will I," exclaimed Pete, who was now introduced to Engleman as the cowboy who had been captured along with the younger Gordon, "ef ye will only let me. Take me along, I won't ask no wages. I only want to get a chance to set the gentleman free I left there, ez well ez to say a word or two to thet man Smith."

"Have you any boats, Awake-in-the-Night?" inquired one of the men.

"Awake-in-the-Night no boats," was the reply. "Perhaps," he said, "you lend me your two boats."

The man spoken to then explained to Engleman that he had built two boats especially for the purpose of running the rapids, and that if they would take him along he would willingly lend them and run the risk of their being ruined.

"I am anxious," he said, "to take this journey, and have long been waiting for a guide and companion. I believe there is no man in the territory who knows these cañons so well as Awake-in-the-Night."

"It is agreed, then," said Engleman. "As soon as we can purchase the proper provisions and equipment for the boats, we shall start. There will be three in each boat. The lad, Awake-in-the-Night, and I will go in one, and Colorado Bill, Pete, and the owner of the boats in the other," he said.

As we shall see, they had ample reason, from actual experience, as to fitness of the awful name Awake-in-the-Night had given to the route; *i. e.*, the Jaws of Death.

CHAPTER XVIII

THE JAWS OF DEATH

The Jaws of Death through which Awake-in-the-Night had offered to take Professor Engleman, Happy, Colorado Bill, Pete, and the owner of the boats were the cañons of the Colorado River. We have already spoken of this river, but to be able to understand intelligently the wonderful adventures of our friends, a somewhat fuller description must be given both of the general character of the Colorado River, as well as of the country through which it flows.

The author is aware of the fact that too many of his young readers may feel disposed to skip this chapter. They are apt to reason, though incorrectly, that because a subject is instructive it is therefore dry and uninteresting. But the author hopes they will take the trouble to read it carefully. If they do, the knowledge thus acquired will enable them the better to enjoy the thrilling chapters that follow. Much of the information contained in it has been taken from the authoritative statements of Prof. or Major J. W. Powell, as contained in a report, in the year 1874, made to the secretary of the Smithsonian Institution, Washington, D. C.

It is surprising how little accurate popular knowledge exists concerning the Colorado River system. In

the first place it may astonish some of my readers when I tell them that it is one of the great river systems of North America.

The Colorado River is formed by the union in south-eastern Utah of the Grand and the Green Rivers. The Grand River, the eastern branch, rises in the State of Colorado, a few miles to the west of Long's Peak of the Rocky Mountain system. The headwaters of this river are derived from a number of small alpine lakes, fed by the melting of the perpetual snows that cover the high mountain slopes. These lakes discharge into a body of water known as Grand Lake, the clear waters of which are bordered on the east by high granite cliffs, and on the west by magnificent forests of pines and firs.

The Green River, the western branch of the Colorado, has its headwaters in the Wind River Mountains of the Cascade Range in Wyoming, in latitude 43° 15' N. As in the case of the Grand, the Green River has its headwaters in a series of alpine lakes fed by the perennial snows of the higher mountain ranges.

The clear, beautiful waters, thus born of melting snow, pour into the common channel of the Colorado, and flow toward the Gulf of California, through that wonderful labyrinth which is about to be traversed by the party above mentioned.

The total length of the Colorado River, from the headwaters of the Green River, is two thousand miles. Roughly speaking, the river basin, or the country drained by the river and its tributaries, has an area

of about three hundred thousand square miles, a territory larger than New England and the Middle States, together with Maryland and Virginia. For those who live farther to the west, I may say that this area is greater than that of the combined States of Wisconsin, Minnesota, Iowa, Illinois, and Missouri.

What gives peculiar interest to the Colorado River system is that although the volume of water it discharges is great, yet most of the country through which it flows is practically a desert, where the rainfall is comparatively limited. This is due to the fact that the larger part of its waters are derived from the melting of the snow on the higher mountains in the neighborhood of the headwaters of the Green and the Grand. It is also because the river flows through deep cañons where the water is, to a great extent, protected from rapid evaporation by the high rocky walls on both sides of its channel.

The Colorado basin may be divided into two parts—the upper and the lower basins. The lower basin, comprising about one-third of the whole, is but little elevated above the surface of the sea. It is terminated on the north by a line of cliffs which rise abruptly, in some cases thousands of feet to the high plateau or tableland above.

The upper basin, comprising the remaining twothirds, rises to the height of from four thousand to eight thousand feet above the sea level. The high country on the east, north, and west is crossed by mountain ranges, the summits of which have heights

varying from eight thousand to fourteen thousand feet above the sea.

The snow covers the mountain slopes during the winter, but as Powell beautifully says, "When the summer sun comes the snow melts and tumbles down the mountainsides in millions of cascades. Then a million cascade brooks unite to form ten thousand torrent creeks; ten thousand torrent creeks unite to form a hundred rivers, beset with cataracts; a hundred roaring rivers unite to form the Colorado, which rolls, a mad, turbid stream, into the Gulf of California."

As some of my readers may know, there are people whose actions are so unpleasant that they make everything unpleasant around them. When they appear, if only for a moment, everything goes wrong. Indeed, I would not be surprised if the old belief in the "Evil Eye" were based on this fact. At one time it was believed that it was only necessary for such a person to cast his eye on another person or thing to cause trouble. Whether this was so or not, it is certain that the Colorado River might properly be regarded as possessing the Evil Eye.

I hope that those of my readers who have followed me this far will ask the question, "What is there about the Colorado River that makes it differ so greatly from other rivers? It contains the same kind of water that is found in other rivers. It drains the country from the sources of the river to its mouth. Why then does it act so differently?"

I might say that the disagreeable people above referred to also resemble other people in many things. It is not difficult, however, to discover why it is that they are so disagreeable, and so in the same way it is not at all difficult to explain what it is that permits the Colorado River to produce effects so different from other rivers.

There is this difference between the basin of the Colorado and the basins of most other rivers. In most cases, when rain falls the water runs slowly off the surface toward the lower parts, when it discharges into another river or into the ocean. During this flow it wears away, or erodes, portions of the surface, carrying the mineral matter with it into the river channel. As it is carried along by the current, these particles of matter, especially the harder ones, such as flint or quartz, acting as saws, planes, gouges, or chisels, deeply cut out or groove the river channel. In this manner, especially when aided by what is known as "weathering," or the gradual breaking up of the surface strata by the differences of temperature between the cooler and the warmer parts of the year or day, both the surface of the basin and the channel of the river are cut down or eroded.

Two conditions result from this combined action of weathering and erosion. The soil, or mineral matter, is removed from the entire surface of the river valley, so that banks of the river are not as a rule much higher than the level of the water in the channel.

These actions are extremely slow, probably requir-

ing hundreds of thousands of years for their completion.

Now, in the case of the Colorado River, the rainfall over the greater part of the basin is so small that most of the water is received on the mountain slopes of the upper tributaries. Consequently, the erosion is almost limited to the river channel. The river differs from most others in that the lands on each side of the channel, instead of having been cut away to comparatively near the level of the water in the river, are often thousands of feet above it. Instead of sloping gradually toward the river channel, they consist in some cases of almost perpendicular walls, with the river flowing at a distance of more than a mile below the general surface, through deep gorges called cañons (can'yons).

The Colorado River then is a river with an Evil Eye, because it differs markedly from other rivers in many respects. To begin with, this river is a curse rather than a blessing to the country through which it flows. Instead of bringing fertility to its basin by permitting the rain water to trickle gently and slowly into its channel, it almost immediately absorbs the scant rainfall, discharging it precipitously into its deep channels, where it flows through a confused labyrinth to the sea.

I have heard the Colorado River compared to that fabulous folklore creature, the vampire, an animal that instead of producing its own blood from good, clean food, lives only by sucking the blood of living animals;

an animal whose existence is only made possible by the suffering and death of other animals. I must confess that there are peculiarities of the Colorado River that amply warrant this comparison, for it certainly does suck the scant water supply, the life-blood of the country, through which it flows.

Then again, unlike most large river systems, the Colorado is useless for transportation purposes. While it might be used for the carrying of timber from the north to the south, yet even supposing that there was sufficient timber safely to be cut without despoiling the country, the channels of the river are too tortuous to permit the stream to be employed for this purpose.

I am not referring to the lower course, which is navigable for a limited distance above its mouth.

The Colorado River flows through cañons for a distance of more than one thousand miles. This great length of cañon can be divided into separate cañons by the gorges formed where comparatively large side streams or tributaries discharge into it. It may be interesting to know some of the more important of these divisions. Since, however, our friends only intend to make the descent from below the point where the Green and the Grand discharge their waters into the Colorado, we will only give the names of the more important divisions between this junction and the lower land near the mouth of the Gulf of California.

Beginning where the river is formed by the junction of the Green and the Grand, and proceeding toward the mouth, we have the following divisions:

Cataract, Narrow, Glen, and Marble Cañons; the Grand Cañon of the Colorado; Virgin, Border, Black, Painted, Pyramid, Mojave, and Monument Cañons; while the dividing streams themselves are the Virgin, Kanab, Paria, Escalante, Dirty Devil, San Rafael, Price, and the Uinta on the west, and the Grand, the Yampa, the San Juan, and the Colorado Chiquiti on the east. (See Appendix D, "Grand Cañon.")

It is a mistaken idea that when a boat once enters the cañons of the Colorado it passes for the entire distance between almost perpendicular walls, the water filling the entire intervening space. The labyrinthine road we have named the "Jaws of Death" is dangerous enough as it is. Were all the walls vertical the death jaws would be so voracious that none could hope to safely pass them. Fortunately, it is only here and there that the walls are vertical or perpendicular. In most cases there are fairly long reaches, where sloping sides that come down to the stream are cut off by a succession of vertical cliffs and sloping sides from the level ground far above.

Another erroneous idea concerning the Colorado is that it has never been navigated. It is true that but few have succeeded in passing all the way from its headwaters to its mouth. Indeed, this was never done until in 1874, when it was accomplished by Major Powell. Coronado, a Spaniard, as well as several others, succeeded in taking a boat for some distance up the river, while Major Dutton and a few others

have succeeded in passing for considerable distances from north to south.

It is unnecessary now to explain in detail any other peculiarities of this wonderful region, since to some extent we shall do this in reciting the dangerous experiences our friends had in the trip that they undertook under the guidance of Awake-in-the-Night.

It may be advisable, however, before closing this chapter to state briefly that while the cañons of the Colorado are due to the gradual erosion of the river channel by the mineral matter which the stream carries down to its mouth, the extent and peculiarity of this action require other conditions. These briefly are:

- 1. That the river shall flow through a region receiving but a limited rainfall.
- 2. That the strata forming the basin of the region, and, therefore, over which the river flows, shall consist of approximately parallel layers. Where these layers are formed of a continuous hard rock like granite the walls of the cañon are nearly perpendicular; where they consist of alternate hard and soft layers they are broken up into series of almost vertical cliffs separated by sloping banks. In the first case the distance from one rim or side cut of the cañon to the opposite rim is very small. In the other case it may reach an extent of many miles.
- 3. That while the erosion has been taking place a gradual elevation of the land is going on that is more rapid in the north than in the south.

CHAPTER XIX

THE START. CATARACT CAÑON

"Come and examine the boats, Professor Engleman," said Mr. Brown. "You can then see what room has been left for the food and other things we will need during our journey."

"Where are the boats?" inquired Engleman.

"About a mile or so below the junction of the Green and the Grand Rivers," was the reply.

The examination showed that the boats had been built of strong oak timber, with double ribs, stems, and sternposts. They had, moreover, been strengthened by two bulkheads that divided each boat into three compartments. Two of these compartments, the fore and the aft, were covered by decks, so built that when closed they formed watertight compartments, thus ensuring increased buoyancy and preventing them from sinking when shipping water in rough places.

My readers may object that our friend had two boats only, and that in the figure a greater number of boats are represented. This is because the picture was taken for a publication describing the last voyage by Powell in 1874, during his journey down the river.

Each of Mr. Brown's boats was eighteen feet in length, and could when unloaded be readily carried over portages by three people.

"I had my boats built after those first taken through the cañons, in 1874, by Major Powell," said Mr. Brown.

"Unless you object to telling me," said Engleman, "I should like to know why you had these boats built,



The Start from Green River Station

and why you are willing to take the risks of going through the cañons?"

"I have no objections to answering your question, professor," replied Mr. Brown, smiling. "I have

been successful in life; am well to do, and have no one to come after me. Of late I have become interested in geology, and have spent much of my time in studying the peculiarities of the cañons formed by some of the smaller tributaries of the Colorado. I have long wished to explore the great canon of the main stream from the junction of the Grand and the Green Rivers to near its mouth. It was for this purpose that I had the boats built. I have owned them for more than a year, but I have been unable to find any one willing to risk the journey with me. When I heard Awake-in-the-Night offer to pilot your party through what he called the Jaws of Death, I was not only willing to risk my boats but also my life for the opportunity of going with you. In the first place, I believe that Awake-in-the-Night knows these cañons better than any other man in the country. In the next place," he said, "I know you by reputation, professor, and am only too glad to have the opportunity of taking this journey with you."

"I do not understand, Mr. Brown," said the professor, "how Awake-in-the-Night is so familiar with the cañons. I was under the impression that his people were generally unwilling to enter these gloomy places."

"It is true," replied Brown, "that generally speaking the Indians are unwilling to enter any of the great cañons. As Powell says, they have woven the myths of their religion into the mysteries of the cañons. There is a myth among them that a long while ago a

great and wise chief had mourned the death of his wife, refusing to be comforted until one of their Indian gods, Ta-vwoats, appeared in a dream assuring him that she was in a happier land, and offering, provided the Indian would cease mourning, to take him to the happier land for a while that he might see for himself. On promising to do this, Ta-vwoats took the chief by a trail through the mountains that shut out the country from the great land of the hereafter.

"The trail through the mountains was the deep gorge now partly occupied by the Colorado River. Tavwoats showed the chief a land of great beauty, permitted him to see the happy condition of his wife, and then led him safely back through the gorge. though the chief promised to tell none of his tribe of the wonderful joys of the land he had seen, yet in order to prevent the earth people from growing tired of their earth homes and desiring to reach heaven before the gods wished them to go, he rolled into the gorge a mad raging stream that would engulf any who dared to reach the Land of the Hereafter by this route. It is for this reason that the Indians regard any attempt to find a passage through these great cañons as a disobedience to their gods, believing that such an attempt to do this would be punished by death."

"How is it, then," inquired Engleman, "that this Indian has become so well acquainted with these canons?"

"I have often asked myself the same question," was the reply, "but have never been able to answer it satis-

factorily. The fellow is frequently seen at different places in the cañons of the San Juan and the Mancos Rivers. He appears to be especially interested in some of the side cañons. I think he knows various trails in the district in which I am disposed to believe Joe Smith and his band of Mormons have either already discovered, or hope to discover, valuable mineral deposits on the sides of the cañons where the strata have been exposed by the deep cuttings."

"Does Awake-in-the-Night know how to manage a boat?" inquired Engleman.

"These boats were built where there is quite a stretch of nearly level water, near the mouth of the San Juan," was the reply. "Awake-in-the-Night has been with me in one of the boats a number of times. He can row, steer, and manage a boat far better than I."

Each of the boats was provided with two pairs of oars and a rudder, as well as with long coils of rope at the stern.

Happy, Bill, and Pete had noticed these coils while the boats were being loaded with provisions. Bill and Pete knew nothing whatever about boats. The coils of rope, however, had a familiar look about them. They looked not unlike the long ropes or lassoes, the use of which they were so familiar with on the land. But it was this resemblance that especially puzzled them. Pointing to one of the coils, Bill said to Pete:

"Looks sorter like a rope, Pete, don't it? But I kain't see what they kin catch with it. Thar sartinly

be no mounts or cattle wandering loose on the sides of the stream we're goin' on. What do ye make of it?"

"I bean't guessin'," said Pete with a smile. "I reckon, however, we'll find out."

"Kin ye make out what these things be fer, Hap?" inquired Bill, turning to the lad.

"I'm sure I don't know," was the reply. "Perhaps they are used to let the boats down slowly in the rapids. However," he added, "I'm sure of this, Bill, that both Pete and you can pull on one end of the line when the other is once caught on something, and you can make it catch on too if it is necessary to throw it."

"I reckon we kin," replied each man, grinning.

The long start the fugitives had, made it advisable to leave as soon as possible. Preparations were made at once for laying in the provisions and other things that might be needed during their journey. Since there were no places along the route where they could expect to obtain additional supplies, it was necessary to take with them a sufficient amount and variety to meet all their needs. At the same time they should not be of too great weight, since at all the portages both the boats and their stores had to be carried.

Their stores consisted among other things of flour, beans, potatoes, rice, coffee, sugar, and canned goods. They also took an ample amount of ammunition for their weapons.

Some of the other stores surprised Happy. These

were various sized pieces of lumber, together with such tools as hammers, axes, saws, and augers, also a supply of nails and screws.

"What do you expect to do with these things, Mr. Brown?" he inquired.

"I am sure, my lad, a little thought would have enabled you to answer that yourself. Our boats may at any time be injured by being thrown against the walls of the stream, or may be staved in by striking against rocks in shallow water. You can imagine what it would mean had we no means of repairing them."

"Thank you," said Happy, "I understand now."

At last everything was ready, and the boats pushed off from their landing-place. They were cheered by some of the mining men who had come down to see them off. The boat occupied by Awake-in-the-Night, Engleman, and Happy led, being followed by the other containing Brown, Colorado Bill, and Pete.

The portion of the cañon where their journey began, as already mentioned, was a few miles below the junction of the Grand and the Green Rivers. This portion was named Cataract Cañon by Powell, because of the numerous cataracts it contained in a comparatively short space; for where they had entered the cañon the inclination of the bed was very great. When they first started, Mr. Brown said to them:

"We shall probably find the first and last portions of our journey the most dangerous. There are rapids in this place that will make it necessary to let the boats down with the ropes to prevent their being broken

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on the rocks. There are also many waterfalls that require frequent portages. When this portion of the route is passed, however, we may expect to reach long stretches where the water is deep, and the stream broad, where our progress will be rapid."

"And where is the other especially dangerous portion?" inquired the professor.

"In the Grand Cañon, where the river flows through the granite with almost perpendicular walls on both sides of the stream."

As predicted, their progress at first was both slow and fatiguing. Frequent portages required the unloading of the boats and carrying them past some dangerous waterfalls. This was fatiguing, as was also the letting of the boats down the rapids, where numerous rocks projected here and there above the water, and the current was too rapid to allow boats to glide freely down. In such places one end of the long rope was fixed to a stout ring in the bow and the boat let slowly down the current by two of the crew holding the other end of the rope, one remaining in the boat to keep it off the rocks. It was hard work, but when done intelligently saved the boats from being wrecked.

Where the channel was comparatively free from rocks they would simply shoot the rapids, that is, allow the boats to be carried freely down by the current. On several such occasions it looked as if the boat would be wrecked against projecting rocks, but a dexterous use of the rudder, or of an oar used as a rudder, carried them safely over.

The delay troubled Awake-in-the-Night, for, occasionally turning to Professor Engleman, he would say:

"Go heap slow now. After a while go faster."

On one of these occasions the boat containing Bill, Pete, and Mr. Brown was upset, and its occupants were thrown into the torrent. Bill and Mr. Brown held on to the sides of the boat, but Pete for a moment completely disappeared. Fortunately, Happy succeeded in throwing him the end of one of the coils, when he was hauled into their boat.

"Thet be the second time ye've helped me, kid," said Pete. "The fust chance I git I'll see ef I kain't do something fer ye."

The overturned boat was taken into the first shallow water and righted. Fortunately, no damage had been done, and since the provisions had been stored with the ammunition in the watertight compartments, they were not wet. It is true that the longer pieces of lumber that had been left outside had floated down the stream, but they were all afterward recovered.

As it was now late in the afternoon they concluded to camp for the night at a piece of shallow water below the rapids where the stream had widened. Here they found an abundance of drift timber, so that a large camp-fire was soon burning and an opporunity afforded for drying their wet clothes.

During their passage through Cataract Cañon, as well as elsewhere, they found many places where the river flowed between nearly perpendicular walls. Generally speaking, however, in such places the water was

so deep that it was only necessary by the use of the rudder or oars to prevent its being thrown against the walls. In other places, however, the river was broad, so they seldom had any difficulty in finding places on one side of the stream suitable for camping.

An aneroid barometer Engleman carried was employed in determining the amount of descent.

There was much to be seen during their journey both through Cataract Cañon and elsewhere. To a man like Engleman, thoroughly versed in geology, there were unusual opportunities for observation while in the boat, as well as afterward at the camp-fire when he would refer to some of the more interesting things he had seen. In this way Happy had advantages in the study of the weathering of rocks and cuttings, or erosions due to running water, and in general geology that he did not fail to make the most of.

As we know, Happy was not only a close observer but remembered afterward all he had seen. Before long he discovered that it was possible, from the kind of rocks they were approaching, to make a fairly good guess of the character of the cañon. One day a change had occurred in the rocks on either side of the stream. They were entering a region of soft shales and sandstones. Happy, therefore, remarked:

"Now we shall not find the walls of the canon so high, nor the distance between the upper portions of the walls so small."

"Why do you say that?" inquired the professor, pleased with the correctness of the generalization.

"Because," was the reply, "the softer rocks are sure to break down. At least, sir," he said, "I noticed that was the case in all the soft strata through which we have passed so far."

"Quite correct, Happy," replied the professor. "Erosion in soft strata is almost always attended by the conditions you have observed. Moreover, since in such strata the water is apt to cut a wider and more nearly level channel the river runs quietly. When it passes through hard rocks, such as granites, it cuts vertical walls on either side that remain standing, since such walls are not readily thrown down by weathering.

"Then too," he added, "you may have



A Side Canon with Walls Two Thousand Feet in Height

noticed that the river also flows quietly through horizontal strata. When the strata are inclined in the direction of the current there are also few rapids and waterfalls, but where they are inclined upstream, and the river cuts obliquely across them, there are many waterfalls and rapids."

Where side streams emptied into the main river channel the openings were most marked, at least where these side streams had cut their way through nearly parallel strata that were alternately hard and soft. Here the tributary streams had cut their way back, forming vast amphitheaters on the side at which they entered.

"You will notice," said the professor to Happy as the boats were making their way past one of these tributaries, "that we can look here for shallow water and boulders; for the side streams fill the main channel with the broken rocks and mineral matters they bring down from their upper sources."

Where the side streams flowed through hard rocks, like granites, the width of the cañons they cut was very small. In some cases the walls were so nearly vertical from the top to the bottom and were so close together that it was difficult to see the sky above. Sometimes it looked as if the cutting had been due entirely to erosion, but that the work had been aided by the presence of fissures or crevices that had merely been cut wider by the stream.

Remembering that fissures were common in the part of the country through which they had passed, Happy remarked:

"I suppose, professor, that where crevices or fissures exist the water running through them deepens them and thus forms gorges."

"One might think so," was the reply, "but I never remember having seen or read of such. The most careful examination shows no traces of clefts or fractures extending in the direction of the cañon."

In some of the wider cañons, especially those formed near the junction of side streams, there were features that greatly interested all. Frequently, after the camp had been located and Bill and Pete and Awake-in-the-Night were preparing supper, Engleman, Brown, and Happy would climb the river's bank to obtain a better view of the country. Here they occasionally found beautiful miniature lakes, the clear waters of which gave admirable opportunity for a bath, a thing that so far as he was concerned, Happy seldom failed to indulge in.

CHAPTER XX

THE CAMP-FIRE. TALKS ABOUT THE MORMONS

WITHOUT attempting to describe the details of their voyage, it may be said that our party successively passed through Cataract and Narrow Cañons. As they afterward learned the former was forty-one miles and the latter nine and a half miles in length. Thus far their progress had been far from rapid, but Awake-in-the-Night assured them, that as soon as they passed the mouth of the next large tributary on the left, they would reach the cañon known as Glen Cañon, where they would be able to make a far more rapid progress.

"I have heard of Glen Cañon," said Mr. Brown. "I believe it has a length of nearly one hundred and fifty miles."

Since they were in pursuit of Smith and his party, they were obliged to make their stops as short as possible. Safety, however, demanded that they camp for the night as soon as the light grew so dim as to make travel dangerous.

To travelers in boats far below the land level, the setting of the sun comes much earlier than it does to those above. This is especially so in smaller cañons, where the walls shut off all the sky except such narrow expanse as is immediately overhead. It is different

in the wider cañons, but even there the light wanes far sooner than on the general surface.

They made but few examinations of the side cañons. When, however, it was possible to camp at such a cañon they did so, since here they were more apt to obtain a comfortable site as well as an abundance of drift timber for the camp-fire.

Colorado Bill and Pete attended to the cooking. As soon as the camp site had been selected and the fire built they began preparations for supper, aided by Awake-in-the-Night after he had seen that the boats were safely moored and made ready for the morning. On these occasions, whenever they could do so, the professor, Mr. Brown, and Happy, while waiting for supper, walked, as far as the time permitted, up the gently sloping walls of the amphitheater, common to many of the side cañons, or made some brief examination of the narrower cañons. These excursions were greatly enjoyed by both men, but especially so by the lad.

In the case of some of the wider amphitheaters of the side cañons, before discharging into the main stream, the waters of the tributary streams had collected in small lakes, and they had succeeded in catching a number of good-sized brook trout both in these lakes as well as in the small streams that fed them. It hardly need be said that when they brought back to camp a good string of trout they were warmly welcomed, for this addition to their food was very acceptable.

On several occasions they had tried to fish in the main stream. Generally, however, these waters were so dirty with red mud, a color, by the way, that gave to the stream the name of the Colorado, or the Red River, that fish were seldom if ever caught. Naturally, whenever the site of their camp appeared to be at all favorable for fishing, Mr. Brown, Professor Engleman, and Happy took their fishing-lines with them and looked for promising side streams. One day when it was nearly time for striking camp their boats were near together. Seeing they were approaching a side cañon, Happy called to the next boat and inquired:

"What is the name of the next river, Mr. Brown?"

"It is called the 'Dirty Devil,' " was the reply.

"How did it come to have a name like that?" asked Happy. "However," he added, "I don't believe I care much how it got its name, but tell me, please, is there any chance of our catching a mess of trout for supper?"

"No chance there," was the reply. "I've read about this river in Major Powell's book. Like ourselves, his party was always on the outlook for a mess of trout. According to Powell, the river got its odd name from the fact that one of their party whose boat had landed long before the others was seen coming back from the stream.

"'Any show for fish?' he inquired.

"'No,' was the reply, 'this river is a dirty devil. You will find no fish in it.'

"And this, indeed, they found to be true, since this river poured into the main stream waters heavily laden with finely pulverized material gathered from the soil on its way."

Their camp-fires were especially enjoyable. During the daytime the air is often very hot, but rapidly chills at sunset. When, therefore, they stopped for the night they were glad to sit around a roaring camp-fire which they invariably kindled whenever it was possible to obtain sufficient wood. It is true that in some places they found it difficult to collect even sufficient to start a fire large enough to boil water for their coffee or tea.

Possibly some of my readers may imagine that during most of their journey the voyagers sat comfortably in their boats, only using the oars occasionally to carry them downstream. In point of fact, they had but little experience of such idle times. In the more rapid portions of the stream they were obliged to work hard in order to keep the boats from being dashed against the rocky walls of the cañons. And where the river channel had broadened, the boats often grounded while passing over a sandbar or mudflat. Then there was only one thing to do.

"Overboard all and lighten the boat," the command would come, when all jumping, without waiting to remove shoes or clothing, they would find themselves in the shallow water. The boat thus lightened, soon could be pushed from the bar and again be afloat. It

was very seldom they reached camp with entirely dry clothes. All the more reason, therefore, for a roaring camp-fire.

There was much that was attractive in these campfires. Night came on rapidly, and when their fire was large the ruddy glow lighting up the objects immediately around them, gave the camp a comfortable look that was greatly increased by contrast with the surrounding darkness and gloom.

"Very comfortable, Bill, is it not?" said Happy one night when the air was unusually chilly.

"It be thet, Hap," was the reply. "But we be burning wood so fast thet onless we git more it won't last until to-morrer. So come help Pete and me roll this big log on the fire. When it burns it will make our camp snug and warm."

"I'm with ye, Bill," said Pete, "and when we do this let's get a big pile of wood together so thet when the story-tellin' begins we won't hev to go around looking for wood to keep the fire goin'."

Pete was alluding to the custom of Engleman and Brown of discussing the important events of the day, or talking about the many geological wonders they had seen, as soon as everything was ready for the night and they collected around the camp-fire.

At the camp-fire all in turn told stories, either about their own experiences or the experiences of others. Bill and Pete spun many wonderful yarns concerning their life among the cowboys. Such stories were exceedingly interesting, as were also those about the

bloody encounters the cowboys, many years ago, had with the wild Apaches and other predatory Indian tribes of the Southwest. Brown, who had spent the greater part of his life in Utah, was able to tell them many interesting stories about the Mormons.

"You must not think," he said on one occasion, "that I am a Mormon. I have a poor opinion of these people; though, in candor, I must say that some of them are pretty square. Most, however, are far from pleasant neighbors. I am not surprised," he added, "that much bad feeling exists between the Gentiles, as the other white people of Utah are called, and the saints, or Mormons."

"Brown," inquired Engleman, "do you know anything about the Danites?"

"I suppose you mean the Avenging Angels?" replied Brown. "Yes, I can tell you some little about them. The name Danites was given to a band of outlaws organized many years ago. It is the general belief that the Danites no longer exist. Some of the people of Utah believe that the band led by Joe Smith can in some respects be regarded as Danites. Indeed, I guess Joseph Smith could tell you no little about those old organized thieves and cutthroats.

"However," continued Mr. Brown, "as Joe Smith is not here, I will tell you the little that is known about them. So far as I have been able to discover, the name Danites was originally given to a band of Mormons regularly organized to act as avengers of blood against their enemies the Gentiles."

"Do you know, Mr. Brown," inquired Happy, "how they got the name Danites?"

"They took their name from the blessing Jacob gave his son Dan. I notice you carry a Bible with you, my lad. Read to us the seventeenth verse of the fortyninth chapter of Genesis."

Happy read the verse as follows:

"'Dan shall be a serpent by the way, an adder in the path that biteth the horse's heels, so that his rider shall fall backwards."

"The organization of the Danites," continued Mr. Brown, "was only for the purpose of protecting the Mormons from the mob. I believe the Danites originally consisted of some three hundred men, bound by a solemn oath under penalty of death to sustain the 'First Presidency' and one another in all things whether right or wrong. The members were divided into companies of fifties and tens, commanded by officers and a general over the whole. I understand too, that special companies were appointed for the purpose of burning and destroying, at first for the sake of reprisal, but afterward in the way of assassinations, in order to fulfil prophecies.

"The Danites naturally attracted to themselves many of the lawless people of the Mormons. Many murders and other outrages were committed against the Gentiles, so that the Danites were greatly detested by all decent people. Nor was the feeling limited to the Danites. It extended to the Mormons generally, who were charged with being the actual leaders of the

outlaws. Naturally, the Mormons denied having anything to do with the Danites. The result has been that if the organization still exists, as some believe it does, it has been kept as much out of sight as possible."

"Do you think, Brown," inquired Engleman, "that the Danites still exist?"

"I am inclined to believe they do. As in the case of the Mormons who are with Joe Smith, these bands are apt to be strengthened by the worst class of Indians as well as by fugitives from justice, who seek in the company of outlaws the safety a decent man would refuse them."

"That, at least," said Engleman, "is what a Russian named Mashinsky has done with Smith's band."

"I have heard of Mashinsky," said Brown.

"It's early yet, Brown," said Engleman. "You have been living so long in Utah that you must be pretty well informed concerning the Mormons. Won't you tell us something about them?"

"With pleasure," was the reply. "As you doubtless know, the Mormons are better known throughout Utah as the 'Latter Day Saints.' By the way," he added, "this sect was formed by a Joseph Smith, a distant connection, I believe, of the Smith in whom we are now interested. The original Joseph Smith founded a sect called the Mormons as early as 1830, not as is generally believed in Utah but at Fayette, a town in Seneca County, New York State.

"Smith claimed that an angel appeared and revealed to him, as early as 1823, a place where he discovered a

number of gold plates on which mysterious writings had been inscribed. It was not, however, until four years afterward that he was able to decipher them.

"The inscriptions on the plates were said to be in modernized Egyptian, which Smith was unable to read until instructed by another revelation. He again examined the box, when he discovered an instrument called the 'Urim and the Thummim,' consisting, I understand, of two transparent minerals shaped like spectacle glasses. When put in a frame and applied to his eyes they immediately enabled him to understand the characters.

"I have been told that the translation thus made by Smith was dictated as follows: The plates were placed on a table on one side of a screen, while Smith sat at this table and dictated to scribes on the other side of the screen. It was in this way that a book, published in 1830, called the 'Book of Mormon,' was written. It was, however, really composed in a Pittsburgh printing-office by a man called Sydney Rigdon who, in producing it, made use of a manuscript that had fallen into his hands.

"The supreme power of the Mormon church is vested in a president or prophet, elected by the entire body. This prophet alone works miracles and receives revelations as the orthodox Mormon believes.

"The Mormons believe in both the Holy Bible and the Book of Mormon. This latter book claims to contain a history of the world from the confusion of tongues, at the building of the Tower of Babel, down to

the end of the fourth century of the Christian era. It was at this time that the prophet Mormon is said to have written the history on the gold plates and concealed them until their hiding-place was revealed by an angel to Smith.

"The religion of the Mormons, although accepted by many, has never been popular in the Southwest generally. The hostility of the people against the Mormon sect was so marked that they were obliged to seek refuge in a town in Ohio, where they rapidly increased in numbers. In 1838 a colony of Mormons founded in Illinois a city called Nauvoo, or the 'City of Beauty.' This city flourished wonderfully and soon contained many people. It had in it a beautiful temple, built, as Smith claimed, from plans revealed to him in a vision.

"There appears to be no doubt," continued Mr. Brown, "that Smith was a dissipated, immoral man, who was so disliked by the people in the vicinity of Nauvoo that he was finally forced to take refuge in jail. A mob, however, that stormed the jail took Smith out and shot him.

"The death of Smith did not put an end to the growth of the Mormon sect. A man named Brigham Young, who had left the city of Nauvoo in 1847, with a company of one hundred and forty-three people, built on the twenty-fourth of July, in the valley of Salt Lake, a town that eventually became Salt Lake City.

"Young informed the colonists that where they

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had settled was 'The Promised Land.' It must certainly have appeared to them a very doubtful kind of promised land; for, as you probably know, the wonderful fertility the region now enjoys has been the result of an intelligent system of irrigation, made possible by collecting water from the rains and melting snows in reservoirs on the sides of the neighboring mountains and leading it over the ground. In this way the desert has been made to blossom like the rose.

"Salt Lake City thus founded has had a marvelous growth, a growth due to the wonderful influence Young exerted over his followers. The one hundred and forty-three original settlers eventually multiplied to a population of more than a quarter of a million in this part of the country. In addition to these there are Mormon communities in other parts of the country.

"So great has the growth of Salt Lake City been, that in 1867 the people erected a tabernacle, capable of seating seven thousand. This building is remarkable for its construction. Although two hundred and fifty feet in length, one hundred and fifty feet in breadth, and eighty feet in height, its roof is without any supporting pillars.

"The public feeling against the Mormons has increased rather than decreased. So great was the feeling against this sect, that a man named Woodruff, who was elected prophet in 1887, found it necessary, in order to meet the demands of the government and secure the admission of Utah as a State of the Union, to issue a manifesto forbidding polygamy."

CHAPTER XXI

JOURNEY THROUGH THE CAÑON CONTINUED

GLEN CANON extends from the mouth of the Dirty Devil River to the mouth of the Paria. Between these the Colorado receives on its western bank the Escalante, the San Juan, and the Navajo Creek, all fairly large streams.

In some parts of Glen Cañon, as well as in other cañons of the Colorado, there are tall, slender, vertical columns of rock that project hundreds of feet above the general surface. These columns are common on the margins of the wider cañons. In some instances they have even resisted the erosion that cut out the river channel, as in the case of a huge column, or monument, projecting as an island above the middle of the stream. It is known as Island Monument, and forms an unusual object rising, as it does, so abruptly from the bed of the river.

As they passed the mouth of the San Juan River, they observed that Awake-in-the-Night appeared to be especially familiar with this part of the cañon.

Recalling the rumors of a rich vein of gold quartz in this part of the country in one of the deep cuttings in the cañon walls, Engleman inquired of the Indian:

"Are there any gold mines in this neighborhood, Awake-in-the-Night?"

"How can Awake-in-the-Night know gold mines?" he replied. "Awake-in-the-Night not a prospector."

Awake-in-the-Night clearly wished the boats to make a short stop at this point. When they passed the mouth of the San Juan River it was only shortly after noon, and therefore much too early to make camp for the night. Nevertheless, Awake-in-the-Night, turning to Engleman, said:

"Heap good place to make camp here. Not so good further on. Perhaps Smile-on-his-Face will take his rifle and go with Awake-in-the-Night and shoot mountain sheep. Heap good to eat."

"I know you are anxious to get on, but some fresh meat would be very agreeable just now. Then, while the lad and the Indian are away, we can make an examination of this side cañon."

"I understand, Brown," replied Engleman, laughing. "You would especially like to make that examination. Well, the delay will not be very great. I think we will do what Awake-in-the-Night suggests."

A site was selected for the camp where the boats could be moored in the shallow water, with a stretch of level ground a few feet above the stream. While Bill and Pete were starting the fire in readiness for the evening meal, Awake-in-the-Night and Happy left camp with the professor and Mr. Brown. The two parties soon separated, the gentlemen going to examine a side cañon, while the Indian and the boy proceeded directly up the main cañon of the San Juan.

"Have you been here often before, Awake-in-the-Night?" inquired Happy.

"Here heap times with Joe Smith and his Indians," was the reply. "Many suns further on," he said, pointing up the cañon, "if go quick, find big ruins of cliff village on Mancos River, where Joe Smith sometimes lives."

Remembering the question put to the Indian shortly before by the professor, Happy remarked:

"There is a big gold mine there, is there not, Awake-in-the-Night?"

Awake-in-the-Night saw what Happy was trying to find out, for he said in an angry tone:

"Why does Smile-on-his-Face ask such heap fool questions? How can Awake-in-the-Night know about gold mines?"

"And yet," said Happy, "in the Colorado Desert Awake-in-the-Night brought beautiful black gold ore to Smile-on-his-Face when he was lying in camp with a hurt leg. Awake-in-the-Night could find gold mine there. Then why not here?"

"Smile-on-his-Face ask too many questions. Awake-in-the-Night not answer them now. Maybe he answer them another time. But," he continued, suddenly changing the subject, "this heap good place for mountain sheep. Smile-on-his-Face look around here for sheep. Awake-in-the-Night go alone and be back before heap long."

With this the Indian left the lad and disappeared on a run up the cañon.

"He wants to be alone," said Happy to himself. "Well, the best thing I can do is to see if I can find any game. I feel sure Awake-in-the-Night intends coming back, so I'll try to kill a sheep. Then I will wait for him for a reasonable time, and if he does not show up I'll make my way back to camp."

It was fully an hour before the lad saw any signs of game, and a half-hour more before he was able to come near enough to risk a shot. He was successful, however, in bringing down a large sheep in excellent condition. He had no more than reached the dead animal when he was joined by Awake-in-the-Night. From his appearance the Indian had been on the run most of the time he had been away. Though evidently pleased to see the sheep the lad had killed, he said nothing, only giving a grunt that Happy interpreted to mean "good," though whether it meant good boy or good meat Happy did not know.

The large mountain sheep, borne into camp, was gladly received by Pete and Bill.

Bill was especially pleased. As the Indian and Happy approached the camp-fire, he said to Pete:

"What did I tell ye, Pete? Ye said ye'd bet thet nothin' would come in the way of meat. When Awake-in-the-Night and Hap left, I telled ye thet ef it didn't it'd be a'cause thar war no meat to be hed; thet ef Hap drew a bead on anything I was gamblin' he'd git it. And see here," he added, when the sheep was placed near the fire, pointing to where the bullet had entered, "a good aim. Straight fer the heart."



"I ain't denyin' thet," said Pete; "and I be only too glad thet the kid hez brung us so much good meat."

It afterward appeared that, wishing to obtain the professor's opinion as to a mineral deposit he had discovered, Awake-in-the-Night had gone to a place he knew of and brought with him a few specimens of such ore as he could get. But it was not until they had reached the next camp, and were ready to turn in for the night, that he handed the specimens to Engleman and inquired:

"Will white chief look at this and tell Awake-in-the-Night is it worth anything?"

To Engleman's experienced eye it was evident that what the Indian handed him was a specimen of free-milling gold quartz that contained a large percentage of the precious metal. Although the gold was distributed in extremely small fragments, yet there was enough present to give the mineral an unusually high specific gravity.

Without answering the Indian's question directly, Engleman inquired:

"Where did you get this, Awake-in-the-Night?"

"Worth anything?" inquired the Indian, repeating his question without replying to the professor's.

"Yes, it is a very rich specimen of free-milling gold," was the reply. "Where did you get it?"

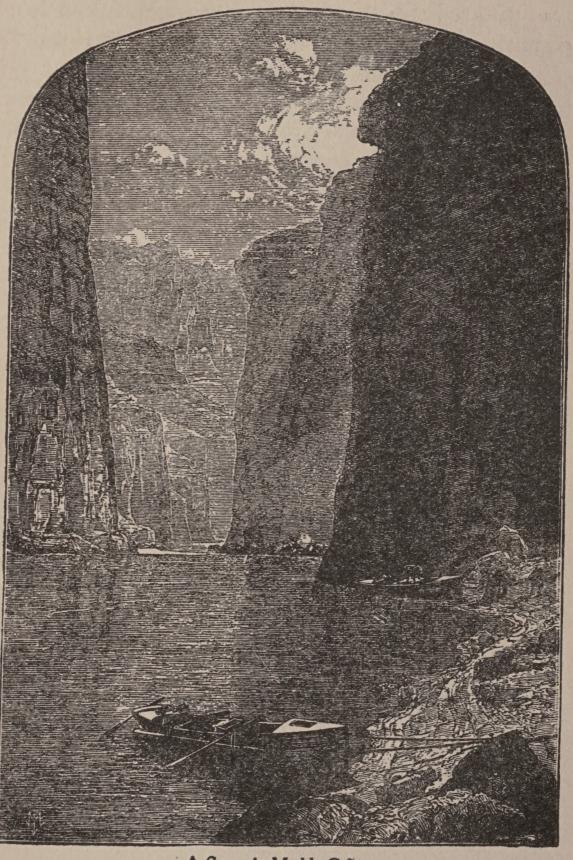
"Awake-in-the-Night heap friend of white man, but not tell white man now. Tell him another time. Get it up there," pointing up the cañon of the San Juan; "but brought it there from another place further

on. Catch Joe Smith first and come back, and maybe Indian will show white man heap good mining-place."

It is not our intention to attempt to describe the remaining canons that lay between the end of the Glen Canon and the lower courses of the Colorado River. The principal of these canons were known as the Marble Canon and the Great Canon of the Colorado River. The Marble Canon takes its name from the character of the rock through which the river has cut its way, and the Grand Canon of the Colorado from the fact that here the depth of the canon is greater than elsewhere. These two sections lie between the mouth of the Little Colorado and the mouth of the Virgin River.

There had been many opportunities for our friends to view grand scenery on their adventurous voyage. Many other places had exhibited scenery grander than that through which they were now passing, but for a combination of beauty and grandeur the Marble Cañon was able to hold its own. I would ask my readers to try to picture to themselves a river sweeping past masses of magnificent marble of varying colors, that wherever reached by the current had been highly polished.

In many of these places the river was wide. During floods it had extended far on either side and polished the solid bed of marble over which it flowed. When our friends were passing through this portion of the Marble Cañon, the water was fairly low, so that they were able to walk for more than a mile on a pavement



A Scene in Marble Cañon
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of polished marble that was set with fragments of differently colored material, that made it look as if some giant had been amusing himself building a pavement into which he had wrought many fantastic patterns.

In Marble Cañon the cliffs are twenty-five hundred feet high and consist entirely of marble. As the marble is of different colors, the appearance it presents when lighted by the sun is beyond description. To be appreciated it must be seen.

Thus far during their voyage rainstorms had been infrequent. When they reached the Marble Cañon a rainy spell set in. Indeed, so wet did their clothes become that, as Happy expressed it, it was actually a pleasant experience to jump into the water.

The sky was clear the day they entered Marble Cañon. As they passed between the high cliffs at a place where the river turns sharply to the east, they saw something on a portion of the marble wall that at first they were unable to understand. The wall looked as if millions of brilliant gems had been set in its surface; for they scattered the light that fell on them so as to resemble the precious stones. Had they discovered a Golconda, where diamonds and rubies could be had for the mere gathering? They scanned the cliffs eagerly and urged the boats forward. When they came nearer the explanation was evident. The seeming jewels were caused by countless little fountains bursting from the rocks high overhead and gleaming in the brilliant sunshine.

While examining this wonderful sight they had the good fortune to see the change produced by a coming storm that broke, as storms are apt to do in this district, with great suddenness. Almost at once in the place of the seeming gems, fed by the rills, came streams of muddy water, loaded with sands and clay, to scour and polish the marble walls over which they poured.

The force of the stream directed against one side of the cliff, where the marble was soft, had hollowed it out in the form of a huge semicircular cave or chamber. There were several of these natural chambers, one of which looked as if it had been made expressly for a huge amphitheater. The river was then low and the floor of the cave quite dry. Wishing to examine the cave, Engleman motioned to Awake-in-the-Night to stop the boat, when he and Happy got out and went a little distance into the cave.

"I am forgetting Mr. Brown," said the professor after he had advanced a short distance. "I will call, asking him to join us."

Brown's boat was some distance back of them, so Engleman called in a loud voice:

"Come here, Brown! Something interesting. Stop here!"

Instantly, as if spoken by a giant voice coming apparently from the back of the cave, they heard the words "interesting. Stop here," and then repeated, "Stop here—here!"

Awake-in-the-Night, who had followed them, said:

"Spirits of the dead say to white man, stop."

"It's nothing, Awake-in-the-Night," replied the professor, "but an echo."

But Awake-in-the-Night, without making any reply, hurried back to the boat.

"I can understand, professor," said Happy, "how the walls in front of us could repeat what you said, but I don't see how they can be repeated again and again."

"The cliff opposite us," replied the professor, pointing to a marble precipice that rose perpendicularly from the opposite shore of the river, "throws the soundwaves back again, so we hear the sounds repeated."

Happy and the professor commenced singing, and both the notes and the words were thrown back with strange strength.

"We will find, I think," said Engleman, "some places where the echoes are the strongest. This will be at the focus where most of the sound-waves collect." Walking about from place to place it did not take long before, to their great surprise, the sounds collected so well that they were greatly increased in strength.

So interested were they that they had not noticed the approach of Brown and his boat, and were therefore startled to hear as if some one had been standing back of them and talking in their ears, a voice evidently that of Mr. Brown, saying:

"Where are the professor and Happy, Awake-in-the-Night?"

"Gone to talk with the spirits in the cave," was the reply.

Asking Awake-in-the-Night to look after his boat, Brown, Bill, and Pete soon joined the other two inside the cave. They had discovered a wonderful whispering gallery. The cave was built on a far greater scale than any of the great domes of any building erected by man. While standing at the focus the faintest whisper from almost anywhere in the cave could be heard.

"This is like what we heard in the cave back of the ruins of the cliff village on the Mancos," remarked Happy.

As they afterward learned, Marble Cañon increases in depth from its head to its foot, where the walls are fully three thousand five hundred feet high. It has a length of sixty-five and a half miles.

Passing out from the Marble Cañon at the mouth of the Little Colorado, or the Colorado Chiquito, they entered the Grand Cañon of the Colorado. The steep descent of the river, and the fact that here it flows through granite, made the passage dangerous, necessitating both frequent portages and the letting down of the boats by ropes. In many places ledges of rocks extended far out into the stream with their tops just below the surface. Where creeks or small tributaries enter the river the channel is often choked with boulders, and in some places dams have been formed, thus making dangerous waterfalls.

One especially dangerous part of their journey through the Grand Cañon, was when they heard a

roar that became louder and louder as they approached. It was caused by a succession of dangerous rapids and waterfalls, with a descent of probably eighty feet in a third of a mile. After much trouble they managed to anchor the boats above a dangerous place in the river and sought a portage. But none was to be found. The increase in the volume of the river the storm had caused had covered the only path. It was out of the question to carry their boats to the top of the granite cliff, one thousand feet above, so they were obliged to take the risk of shooting the rapids. It was a dangerous undertaking, but they had no choice. Freeing their boats they were soon being carried at a very rapid pace down the stream. Again and again the boats were nearly destroyed by being dashed against the rocks, but the danger was averted by skilful steering, and at last they were riding in comparatively quiet water.

Other waterfalls and rapids, however, barred their progress. The cañon is narrow and the waters, instead of flowing quietly, boil and swirl, often carrying the boats now close to one of the walls, now to the other, and now catching them and spinning them so rapidly that they were almost unmanageable.

Again and again it seemed as if there was no hope of their getting through safely. But even had they wished they could not turn back. They must go onward, and so continued until they came near being engulfed in a place where the river is said never to give up its dead.

CHAPTER XXII

A STORM. BOTH BOATS LOST

A TRYING day was drawing toward its close. It had rained almost steadily since early morning, and they were wet to the skin. Now that they were in the granite portion, in almost the deepest portions of the cañon, where the surface was more than a mile above the level of the river, portages were practically impossible.

The darkness would soon be on them, and unless a place to camp was soon found they would be compelled, as they had several times before, to pass the night in the boats.

"I am afraid we will be unable to find a site for a camp, Brown."

"I hope you are wrong," replied Brown; "but it certainly looks that way."

Turning to Awake-in-the-Night, Engleman inquired whether there was any hope of reaching a camp site before sunset, and was glad to be assured that about a mile farther down they would come to a side cañon in the main stream where they would find a good camping-place.

"Are you sure?" inquired Engleman. "Have you ever been down here before?"

"Awake-in-the-Night sure," was the reply. "Has been here before with Joe Smith."

"Was the passage then as bad as it is now?" inquired Mr. Brown.

"River not so bad then. But," he added, "we soon find good place for camp."

After they had gone about a mile farther the side cañon came into sight. Awake-in-the-Night did not speak, but contented himself with pointing triumphantly to the place.

The camp site thus pointed out was excellent in all respects but one. While there was plenty of level space where they could build their camp-fire, the stream was deep close to the bank and, moreover, was fairly swift. In order to keep the boats in place, it was necessary to secure them by placing their anchors on the land and also by attaching the ropes to rocks on the shore.

But there was one feature about the site that pleased them. This was the abundance of drift timber that had been swept down the side cañon and into the main stream. But they found it difficult to kindle a fire. The wood had been so thoroughly wet by the rain that it was hard to start it, and when started it was even harder to keep it burning, since a strong wind, blowing down the cañon, drove the rain directly against the fire and threatened to put it out again and again.

But these difficulties were nothing compared with what they met when they began trying to do any cooking. Although they succeeded at last in getting the water to boil for a pot of coffee, Bill, who was en-

deavoring to bake some flapjacks, at last gave up the attempt in disgust.

"I reckon, Pete," said Bill, "we kain't have flapjacks to-night, onless this storm stops awhile."

A short distance up the right-hand bank of the side cañon, about forty feet above the surface of the water in the main cañon, the nearly vertical walls had been hollowed out by the action of the water so as to form a kind of a cave.

When Happy saw Bill's difficulty with the fire, he said:

"Don't you think you'd find that place better for our camp-fire, Bill? Build it under the cliff there. The way the wind is blowing now leaves that place almost dry."

"Thet be a good idee, Hap," was the reply.

"That is certainly the place for our camp," said Engleman. "I can't understand why we did not see it long before."

"It was nearly dark when we landed," said Brown. "We only see it now by the light from our fire."

A big pile of driftwood was soon collected near the cave. A moderately good fire was readily started, and Bill again began preparations for supper.

"I'll help you, Bill," said Happy, "by getting some things from the boat."

"Awake-in-the-Night go too. Will help git big supper," said the Indian.

Before long they returned, staggering under a heavy load, made up of flour and other articles of food, their

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rifles, and other things the boats had been laden with.

As they approached the shelter of the shallow cave, they were greeted with laughter by Mr. Brown and the professor.

"It looks as if you intended to eat a big supper, don't it?" said Mr. Brown. "Why have you brought all this stuff with you? There is enough there to last for more than a week."

Engleman contented himself with remarking good-naturedly:

"Better put it under shelter of the rocks and cover it with the rubber blanket. Why did you bring so much?" he inquired of Bill.

"Ef ye hed seen the water in the kivered place we brung this stuff from, ye'd not ask thet question."

"But what makes the compartment leak? Has the boat been injured?" inquired Engleman anxiously.

"I reckon thet part of the boat hez got some purty hard blows. Anyhow, the place hed enough water in it to spile the stuff, so we brung it all along."

"I suppose, Happy," said the professor, "that is why you have brought the weapons. Of course you have brought the ammunition?"

"I brought all the shells I could find, sir," replied Happy.

"We had better go and look at the boat, Brown," said the professor.

An examination showed that a seam had started in the covering of one compartment, as well as in a portion a short distance below the water-line, so that con-

siderable water had leaked in. The other compartment of that boat, and the two compartments of the other boat, were found to be uninjured.

"We had better bring all the things in this compartment to the cave," said Engleman to Brown.

This was soon done, and the goods packed away as far as possible from the opening of the shallow cave and covered by the rubber blanket.

It was a great supper that Bill and Pete prepared for the hungry and wet voyagers, as they sat huddled together near the cheerful fire under the protection of the overhanging rock.

Their meal consisted of hot canned soup, flapjacks, stewed apples, and tea. Three things conspire to ensure a good meal: the food, its preparation, and sharp appetites, and the last is most important. All of them had eaten better food, and much better cooked and more delicately served, but none of them had ever eaten with greater zest. These appetites had, as it were, been in training all that day, so that the meal was enjoyed to such an extent that in after life they often seemed to eat it over again in imagination, and never failed to speak with great satisfaction about the good things they had on that memorable occasion.

Moreover, their camp under the overhanging rock had at last become fairly comfortable. It was cozy and warm, and their clothes were rapidly drying.

Everything was at last cleaned up for the next morning, and they were beginning the usual camp-fire stories, when the storm suddenly increased in violence,

accompanied by a change in the direction of the wind. The rain was now blown directly toward the fire and into the cave, so that it again became a question as to whether they could keep the fire burning through the night.

Toward midnight they made an effort to protect the cave and fire by leaning a number of the longer pieces of drift timber against the projecting wall of the cave. This proved a very inefficient protection, although it was somewhat improved by the judicious use of nails, another visit being made to the boat to obtain necessary nails and hammers.

The remainder of the night was spent in great anxiety. The storm increased in severity and the water began to rise both in the main and in the side cañons. It was in the side cañon, however, that the rise was most marked. They could hear the water rushing down the narrow gorge. Although they could not see around them, yet occasional lightning flashes enabled them to see that a great flood was pouring onward.

Several times during the night they visited the boats to see if they were safe. At last, after a considerable effort, they succeeded in drawing them up the side of the stream and making them, as they thought, secure, returned to the cave and a restless slumber.

By next morning the storm had blown itself out. The sun was shining, and the air was rapidly growing warmer. Naturally they hurried to where their boats had been moored. To their horror they had completely disappeared. The ropes had broken short off

from the rocks as well as from the anchors to which they had been attached.

Their situation was indeed desperate. All their food and supplies, except what they had carried to the cave, were gone. And with the boats had gone the only means they had of continuing their journey.

"Heap bad," said Awake-in-the-Night. "No trail to top. Cañon bad place to find food. We may

starve."

"Our situation is desperate, Brown," said the professor. "I imagine by this time, even if we could manage to reach our boats, we would find them useless. What would you advise?"

"It is hard to say, Engleman," was the reply. "I do not at present see what we can do."

Bill and Pete were unable to give any advice as how to get out of what they called a wet road that only ran one way, and in which mounts were of no account. Had there been horses to deal with these men could have advised admirably.

But it did not appear to cause Happy any great anxiety. On the contrary, a succession of characteristic smiles chased one another over his countenance, so that Bill lost his patience with the lad, which was, by the way, an exceedingly unusual thing.

"What be ye grinnin' at?" he inquired. "This be so bad a thing thet none of us may stay alive to tell folks what hez happened."

Engleman, who knew Happy better than the others, said to him:

"I am sure, my boy, you could not smile unless you thought you saw a way out of the difficulty. If there is, let us hear your plan. I remember that when we were traveling through the Colorado Desert, it was what you were willing to regard as good luck that brought these smiles. Now I do not see how in the loss of our boats and most of our provisions you can find any piece of good luck."

"I do not deny, professor," said Happy, "that this is bad luck. I understand how serious a thing it is to have lost both boats and most of our provisions, but was it not, sir," he continued, "a piece of wonderfully good luck that caused us to collect all this wood around the cave and bring out of the boats some of our provisions?"

"I am not denying, my lad," said the professor, "that we were fortunate in saving some of our provisions. But I don't see what advantage we can get from the wood except to build our camp-fires, and unless we can find something to eat there will soon be no use for camp-fires, at least so far as cooking is concerned," he added.

"I was thinking, sir," said Happy, "that with all this wood and the few tools we have here we might be able to build a couple of rafts that would at least enable us to go down the river to some place where we would reach the surface."

Brown, who had been listening to the conversation, said:

"The lad is right, Engleman. He has pointed the 278

way out of our difficulty. See," he said, pointing to a couple of hatchets and saws that had been brought from the boat, "with these tools and with the abundance of wood we can obtain at this place we should be able to build two fairly good rafts."

Happy's suggestion brought out no little praise from the rest of his companions.

"Smile-on-his-Face, big head. Make two rafts and go down river to catch Joe Smith."

"Hap," said Bill, grinning, "ye sartinly be a brainy chap. I ask yer pardon for getting mad like. Now thet ye hev pinted out the way it seems orful easy to git out of this here place."

CHAPTER XXIII

WRECK OF THE RAFTS AND RECOVERY OF THE BOATS

The building of the rafts having been determined on, it became a matter of importance to decide as to their size and general construction. They were uncertain at first whether a single raft would not be preferable to two or more. It was argued, it would be easier to build one; that, moreover, with all six on one raft it could be steered better. It soon became evident, however, that a single raft large enough to hold six would be difficult to manage. Indeed, such a raft would be too wide to pass through many of the narrow places. They therefore determined to build two rafts of about the length and breadth of their boats, and to divide the food and other stores equally between them.

They knew by their experience in shooting rapids the dangers apt to arise with boats of too great length. When caught in an eddy the boat is spun in the water, and in trying to pass between projecting rocks may catch and be held in place with the ends resting against the opposite rocks. This danger they avoided by making the rafts as short as practicable.

When thrown into the water from the boats they relied for safety in holding to the sides of the boat. This led them to nail short loops of rope on each side of the rafts.

They built the rafts on the low ground close to the river. When completed, they were able, by the use of rollers and levers, to move them down into the water. Each raft was formed by placing four rather wide logs side by side, and held together by cross pieces pinned firmly upon them. While building the rafts they had the advantage of Mr. Brown's skill as a carpenter, which was a great help. It required, however, two days' hard work to complete their task.

Their oars had been carried away with the boats, so each man was provided with a long pole by which to guide their rude craft.

They provided watertight receptacles for holding their limited food supply and ammunition. These consisted of boxes, made watertight by covering them with pieces of rubber blanket. They were secured to the raft by a rough enclosure built of split logs.

'Although the storm had passed over, yet the river continued rising for a while, but soon rapidly began to fall. When everything was ready, the rafts were launched upon the stream and started on their perilous attempt. The division of the crews was the same as in the boats—Awake-in-the-Night, Professor Engleman, and Happy leading on one raft, and Mr. Brown, Pete, and Bill following on the other.

It was not long before they made an encouraging discovery. Everything considered, the rafts proved to be stronger than the boats, and less apt to be injured when carried against the rocks in the channels or against the walls. Though the sudden shocks thus re-

ceived were far from pleasant, yet they gradually became accustomed to them.

So much of their rope had been carried away with the boats, or had been used on the sides of the rafts, that comparatively little was left. Each raft, however, was provided with a line of a quite considerable length, sufficient to tie up for the night and to let it down the rapids.

It is the second day of their use of the rafts. Happy is standing on one side of the raft, Professor Engleman on the other side, and Awake-in-the-Night at the head. All have their poles in their hands. Suddenly the raft, caught by the current, is hurled toward the rocky wall on Engleman's side of the cañon. A quick motion of his pole turns it, thus avoiding a serious bump.

The next moment Happy in the same way prevents the raft being dashed against the wall. At still another time Awake-in-the-Night changes the direction of the raft, and so prevents its being hurled against a projecting rock.

"I like the raft much better than the boat, professor," remarked Happy. "I can move about on a raft and am not obliged to remain seated hour after hour."

"Yes, Happy," was the reply, "rafts have many advantages over boats, but then boats are more easily managed by oars than rafts are by poles. It is true, as you say, that one can safely move around on a raft."

"But don't you think," persisted Happy, "that poles are more pleasant to use than oars?"

"Yes, for keeping the raft off rocks or from striking walls; but for moving through the water I prefer oars."

While the professor was talking they came to shallow water, where the raft was suddenly grounded on a sandbar. By the use of their poles they had no difficulty, however, in pushing it over.

"Here, at least," said Happy, laughing, as the raft again caught by the current continued its way down the stream, "you must acknowledge that poles are better than oars."

"I do not deny that poles are suited for pushing, while oars are poorly adapted for such work," was the reply; "for their ends are somewhat curved and they are not long enough."

Again they are suddenly stopped, this time in a shallower part of the stream. All three push with their poles, but are unable to stir the raft. They must, therefore, jump into the water, thus by lightening it permit it to float again.

But a dull roar ahead warns them of their approach to a rapids. They go cautiously, and let the raft down by their line as far as its length will permit. Passed in this way through the more dangerous part, they shoot the remainder; that is, let the current carry the raft down, relying on the use of their poles to direct it.

In shooting rapids they are unable to avoid rocks

hidden in the channel. Again and again they are thrown in the water, but the loops of rope hanging to the sides of the raft enable them to catch and hold them.

"Climb back on the raft again as soon as you can, Happy," said Engleman on one of the many occasions when both had been thrown into the water. "The danger here is from having a limb broken or being killed outright by being dashed against the rocks."

On a similar occasion when Happy had been thrown into the water, Awake-in-the-Night said:

"Come back to raft heap quick, or the rocks will get you."

Notwithstanding these inconveniences, rafting through the cañons of the Colorado would have been pleasant enough had it not been for their limited food supply. Immediately after the loss of the boats, they had been obliged to cut their rations to one-half the usual amount, and before long they found it necessary to cut this small amount in half, so that they were then living on one-fourth the usual quantity.

The most alarming part of their situation was that they saw no reasonable chance of adding to their food supply. They were still in a portion of the cañon where the river runs through the granite, and the walls on either side were practically so steep and high as to prevent their reaching the surface, and the same condition effectually prevented game animals from reaching the river from above.

Their condition had all along been dangerous, but

owing to a serious accident one day it reached a crisis so acute that unless additional food was obtained starvation threatened them. They had just passed a long succession of rapids, during which they were repeatedly thrown from the raft. But in all cases they had been able to regain the raft without anything worse than a thorough ducking. At last, however, the portion of the rapids through which they passed was so very rough that both boxes containing their food were broken, and the water washed into them. When the rapids were passed they succeeded in mooring the rafts in a piece of shallow water, where an examination was made as to the extent of the damage. They found that their scant supply of flour had been thoroughly wet, and their little store of sugar had almost entirely disappeared.

This loss of food was so great that at their next meal, which was delayed as long as possible, a ration of one-sixteenth of the usual amount completely exhausted their supply. The next day they began to suffer from hunger that grew more and more acute.

Their rifles had been repeatedly wet, but as well as they could they had kept them in condition should any game appear. But none was to be found in the deep cañon. The river ran so far below the surface that the sunlight only reached it when the sun was nearly overhead. They tried fishing, but the Colorado is here so loaded with mud that fish cannot live in its waters. On two different occasions, Happy and Bill had each killed a wild duck. These were indeed delicious, but

a single bird when divided among six people makes a very scant meal.

At last they grew so weak from hunger that they were unable to attend to the rafts. They were obliged to let them go as they would, bumping against the walls and now against projecting rocks. Fortunately, no serious harm was done. They were lying quietly on the raft, almost too weak to speak, when the Indian said:

"Awake-in-the-Night knows a place where there are many cliff houses. Joe Smith and his men always stop in one of them when they come down the stream, and sometimes leave food for next time. Awake-in-the-Night not certain, but thinks maybe he find a little food there."

"How far from here is the place?" inquired Engleman, anxiously.

"Not far," was the reply; "we soon reach it."

At last they came to a place on the side of the stream where the walls of the cañon were more sloping than usual, and the river broader. Here they found the ruins of a number of cliff houses that had been built on the top of one of the higher terraces.

The hope of food gave them strength, and Awake-in-the-Night led them up a path by means of which they at length were able to reach the houses. Entering the largest, an eager search was begun for food. At first they found nothing that could be eaten, but at last some mouldy bread and musty flour, with a few pounds of dried beans and a little tea were dis-

covered. By no means enough for an ordinary square meal, it was something. They prepared a meal of this food that was moderate for two reasons. First, because it is dangerous for people who have been starving to overeat, and secondly, because the quantity of food they had found was so small that it was necessary to make it last as long as possible.

Like most all the cliff houses they had visited in this part of the country, the principal rooms were situated at the front of the cliff below an overhanging rock. The houses were built on a hard stratum of rock parallel to the roof. The excavation had been made in a softer rock lying between the two parallel strata. There was also found a room back of the main room that could be reached only by the usual entrance.

Remembering one of the back rooms of the cliff houses on the Mancos, where a store of dried corn had been found, Happy said:

"If I had a candle or torch to light me, Bill, I would look through the rooms back of the house."

"Ef it is only a light thet ye need, Hap," said Bill, "here be some dried cactus I reckon some of Joe Smith's people hez brought here. But I don't think ye hev any chance a finding any food, though," he added, "that be no harm in yer tryin'."

"Awake-in-the-Night, who had heard this conversation, remarked:

"Smile-on-his-Face heap bright. Maybe he find some food; maybe not."

But Happy did his own thinking, and was not much

influenced by Bill and Awake-in-the-Night. He made a careful search through a number of these rooms, and at last, in a larger chamber, he found a small store of dried corn.

It was dry and far from attractive, but as Bill remarked:

"When it be roasted in the fire it's a blame sight better'n nothin'."

So disheartened had they become by repeated troubles, and so weak from insufficient food, that in a half-hearted way they permitted the rafts to be carried by the currents as they would when they resumed their journey. Moreover, another danger was threatening them. The rafts were beginning to go to pieces. At last they were dashed against the rocks with such force as to be completely wrecked, and they were all thrown into the boiling current.

They thought the end had come. Fortunately, the disaster occurred in a place where the water was deep. Although they were drawn below the surface by the eddies, all rose again and were finally landed on a sandbar on one of the banks of the river.

Scrambling to their feet they hurried to where the sandbank projected above the water. If they were astonished to find that they had all been thrown without serious injury together on the same sandbar, that astonishment was nothing to what awaited them; for there, near them, were both boats lying together with their bottoms turned upward!

"What an astonishing thing," exclaimed Mr. Brown, "that we should be thrown on the very place where we find our lost boats side by side!"

"I look on it as more than a coincidence, Brown," said Engleman. "To me, this is the act of our heavenly Father, who orders all things."

I am glad to hear you say this, Engleman," replied Brown. "I agree with you. Nothing happens by mere chance."

"Cap," said Bill, "shall we try to turn the boats over, and see ef any of the food-stuff kin be eaten?"

"Do," was the reply. "I hardly think that any of the airtight compartments will be found free from water, but the canned goods should not be injured."

They were so weak that it was some time before they succeeded in getting the boats in an upright position. The remaining compartment of the boat from which they had taken the food supplies on the night of the storm was broken, so curiously broken that they examined it silently for several moments.

"That's strange, Engleman," said Brown, at last breaking the silence. "That compartment looks as if an explosion had taken place from within. See how the top cover has been arched as if considerable force had slowly been brought to bear on it. What do you suppose has done this?"

"I am unable to say," was the reply. "Let's remove the top and look. Perhaps we'll find the explanation."

Since stones were their only tools, it was some time

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before they could do this. At last, however, the cover was removed, when the explanation was so simple that none of them could refrain from laughter, though it was not very loud. The compartment had been stored, among other things, with a considerable quantity of dried beans and rice. Enough water had leaked in through the strained seams to cause the beans and the rice to swell, and the increase in the bulk had produced a pressure sufficient to burst the strong wooden covering.

"One would not think, professor," remarked Happy, "that so great a pressure could be produced in so simple a manner."

"It may seem strange at first, my lad," was the reply, "but like many other things, when we come to think about them they cease to be astonishing. It may interest you to know that when it is desired to prepare a human skull for lecture purposes, with its different bones nicely separated from one another, it is only necessary to fill the emptied skull with dried beans and water, and then plug up all the orifices. The beans then swell and produce a pressure sufficient slowly to force the different bones apart."

The professor's explanation apparently possessed but little interest to Bill and Pete. To them the important question was, were the beans fit to eat? It is true they smelled quite sour, but as Bill suggested:

"I reckon thet ef warmed they'll make good eatin', especially for hungry fellers who air not partiklar; fer the heat will drive the sour taste away."

And in point of fact, this was found to be the case.

The compartments of the second boat were almost watertight, so that the provisions they contained were not only in good condition, but were sufficient in amount to last for many weeks to come.

They were near enough to the shore to form a camp, and here they remained for another day. The plan of loading the boats with duplicate articles resulted in their finding in the uninjured boat tools, nails, screws, etc., necessary for repairing the damage the other boat had received.

By the help of the nourishing food, thus almost miraculously preserved for them, they were ready when the boats were again pushed off from the shore to continue their dangerous voyage down the cañon toward the river's mouth.

CHAPTER XXIV

Again on the Tracks of the Danites

But let us for a while leave Engleman and his party floating down the Colorado River after the fortunate recovery of their boats, and return to the combined parties of Christian and the detectives. As will be remembered, Christian's party included Rob and Norman, the Chinese cook Sam Lung, and the two cowboys who had been engaged to take the place of Colorado Bill and Awake-in-the-Night. The detectives' party included Petromelinski, Blank, Francksen, Fred, and the two cowboys they had brought with them.

In addition to the above, there were at the start twelve miners from different camps in Utah, who had volunteered to accompany our friends. These men had remained with them for three days only. When they found that Smith's band not only had much faster horses, but also knew the country through which they were passing so much better than any of their pursuers, and that there did not seem to be any chance of overtaking them within a reasonable time, they determined, though reluctantly, to return to their camp.

"While we wish to do all we can to help you, gents," said the man who acted as their leader, "we

cannot afford to leave our work for the time it seems will be required."

"I cannot blame you, gentlemen," said Mr. Christian, "for this decision."

"I have been talking the matter over with my mates," replied the man. "They agree with me that you should have no trouble in getting all the help you need at any of the mining camps you pass through. Let the miners know what the trouble is, and they'll be glad to help you."

It was a bitter disappointment to Joseph Smith to have the sale of his mining prospects in Utah come so suddenly to an end. He had counted on it for the money he needed to push work on some of his mines in California. He had made an effort to capture the detectives, and had pursued them for some distance, but when he heard from his Indian scouts, who had hurried the Gordons to him, that a party of miners from the neighborhood were pursuing him, he gave orders to beat a retreat.

"It is different now," he said to the Mormon next in command to himself, "from what it was fifteen or twenty years ago. We might have then made a stand against these fellows and wiped them out."

"I reckon ye could do thet now, Joe," said his lieutenant. "We know the country so much better than they that we could put up a running fight and drop them off one after another."

"Yes, we could do it," replied Smith; "but you

don't seem to see that if this were done there would be a general rising of the miners in this region, and we would be cleaned out. Even if the miners let us alone," he added, "the United States government would be sure to look after the matter. No; we can do nothing but run. We cannot afford to risk our mining properties and our plan of forming a new city in southern New Mexico."

"It seems a shame, Joe," said his lieutenant, "when you were so near selling the claims those fellows nipped the deal in the bud."

"I'll not forget what I owe them," replied Smith with a great oath, which would have sounded odd coming as it did from one of the leaders of the Latter-Day Saints, had not the double character of the man been considered. "I'll get even with them yet. I'll make them suffer for all the trouble they have given me."

"What will you do? Will you order the Indians to shoot them? That could be done easily."

"Shoot them," replied Smith with another oath.

"Not much; that would be simply a few moments of suffering and then all would be over. No; I'll take them prisoners."

"And then," inquired his lieutenant, with an expression on his face that Joseph Smith readily understood; "what will you do then?"

"I see I need not explain," replied Smith. "I will only say, watch me when we capture these men. I will give them a punishment that will never be forgotten."

Seeing Smith's feelings toward the detectives, Mashinsky, waiting for an opportunity of approaching him, remarked:

"I have more reason to hate these men than you. Let me get rid of them for you. Give me a gun or rifle and I promise you they will not trouble you much longer."

Smith angrily replied to the Russian:

"Get back to your place among the Indians. They are the only ones you are fit to associate with. Don't come here and talk to me. I am able to revenge myself without calling on a fellow like you to help."

"There is no sense in your getting mad," said Mashinsky in a surly tone; "I was only offering to do what I thought you would like to have done."

Smith made no reply to this remark, but beckoning to the leader of the Indians, said:

"Keep this man among you. Under no circumstances let him have a rifle or a revolver. If he attempts to leave you, shoot him."

"Let him have his knife?" said the Indian, pointing to his stiletto.

"Yes, you can let him have that to defend himself with," was the reply.

The belief that Smith was on a rapid retreat to the Colorado Desert appeared to be correct. He had a valuable gold mine there, the one that for want of a better name was referred to in "Across the Desert," as the "Mesa of Rob's Dream."

Joseph Smith was by no means an ordinary man. On the contrary, he was gifted with mental powers far above the average. The plans he had formed for building a great Mormon city that should outrank Salt Lake City, founded so many years before by Brigham Young, would require considerable money. It was for this that he had been acquiring mines and mining prospects in the great Southwest. But now he was greatly troubled. He understood too well that the hue and cry raised against him by the detectives was most dangerous, and that if his operations were to continue it would be necessary to let the feeling thus aroused die out. He, therefore, gave strict orders forbidding his lawless company to commit any outrages at that time at least. In the beginning of his career, Smith's operations were almost entirely of the lawless kind, but popular feeling against bands of this character had grown so great that, of late years, he had kept himself within bounds and limited his enterprise to mining operations.

He had found it necessary to establish temporary homes, or places of refuge, in various parts of the country through which he operated; that is, in Colorado, Utah, Nevada, New Mexico, Arizona, and California. These were carefully selected in regions that were seldom, if ever, visited by other white people, or were in places so difficult of access that an effective resistance could be put up by a comparatively small number of determined men.

There is probably no portion of the United States 296

that contains such complete hiding-places as that through which Smith was retreating. The deserted cliff dwellings afforded fairly comfortable temporary homes, and, at the same time, were almost impregnable. Probably the safest of such places were found in that extended region embracing the main or side cañons of the Colorado River. Once in them Smith and his party were almost absolutely safe.

Two routes were open to them as they retreated to the Colorado Desert. One of these, requiring the crossing of the Grand River, would take them down the eastern banks of the Colorado. After crossing, besides a number of smaller streams, the San Juan and the Little Colorado, he could reach California by crossing the Colorado River considerably south of the Grand Cañon. Since, however, this route would take him in places through a somewhat settled district in Arizona, and would oblige him to cross one or more railroads, he discarded it.

The other route, which required the crossing of the Green River, would enable him to pass through southeastern Utah, northwestern Arizona, and southeastern Nevada, and California. When intelligently selected, this route could be made to pass through a country where the chance of meeting a white man was very small. It was, therefore, the one selected.

Petromelinski and Blank were again becoming restless. So far they had not even been able to come up to

the pursued or do anything more than catch glimpses of them. This method of running down fugitives differed so greatly from that they generally employed that they were dissatisfied.

"If we were sure these fellows are going to the Colorado Desert, Ivan," said Blank to Petromelinski shortly after the miners had left them, "our most sensible plan would be to make for the nearest railroad, go on ahead to Yuma, and from there to the Colorado Desert and wait until they come up. While doing this we could get together bands of miners, and make it hot for them when they arrive."

"But suppose you did this, Blank," said Petromelinski. "We would no sooner get on the cars but they would know of it and change their plans. You think these fellows keep posted on our movements, do you not?" he continued.

"I'm almost certain of it," was the reply. "Smith has bands of Indians who could easily follow us, and indeed, for that matter, even visit our camp without our being able to recognize them."

Convinced that it would be foolish, at least at that time, to attempt to get ahead of the pursued, the detectives reluctantly remained with the rest of the party.

Many days had now passed since Colorado Bill had left in his endeavor to find Happy. It had been almost as long since they had seen Engleman and Awake-in-the-Night. The uncertainty concerning their friends

gave them much uneasiness. Rob especially missed the professor and Happy.

"Mr. Christian," remarked Rob, "Professor Engleman and Awake-in-the-Night will probably turn up all right, but I wish I could feel as sure about Happy and Colorado Bill. It seems almost hopeless for one man to be able to trace Happy through the kind of country in which he disappeared. Even supposing that Bill should succeed in finding Happy, the chances of one man being able to set him free seem very slim."

"What you say has much truth in it. Still, let us hope for the best. As for Professor Engleman and Awake-in-the-Night, I have no doubt they will soon join us. As for Happy and Bill, I am not so certain, but I am hoping for the best."

Petromelinski, who heard the conversation, surprised both Mr. Christian and Rob by remarking:

"Here comes Blank. Unless I am mistaken he brings good news concerning our absent friends."

"How can that be?" inquired Christian in surprise. "I don't see how he could have heard anything about them."

Petromelinski smiled and said:

"You will understand it in a few moments. In the meanwhile look at Blank's face, Mr. Christian. You can see that he has news and good news."

"I bring good news!" cried Blank as he approached, waving a telegram. "Listen to this."

"Who sent you the telegram, Blank?" inquired Christian.

"The captain of the mining men. When he left us I asked him to wire full particulars if either Engleman and Awake-in-the-Night, or Bill and Happy, turned up at different stations along the route we would probably take. He has sent this telegram."

"Of course," said Christian, "a natural and sensible thing to do. It is a wonder I never thought of it. But let's hear the telegram, Blank. Does the good news I read in your face concern both of the missing parties?"

"Listen," said Blank, who then read the following:

Several days after we left, with you in pursuit of Joe Smith, Engleman and his Indian guide, together with Colorado Bill, a white lad, and a cowboy named Pete, came into our camp. Learning that you were so far ahead of them, they determined to attempt to reach you by way of boats down the canons of the Colorado. These boats were obtained from a Mr. Brown, of Utah, who accompanies the party. They are guided by the Indian, Awake-in-the-Night, who is said to be familiar with the dangerous route your friends have taken. If they meet with no accidents, they hope to reach the lower waters of the Colorado either at Yuma, Arizona, at the Needles, or still further to the north, in time to meet you.

"That's the greatest news we have had for a long while," said Rob. "All our friends safe. Norman, we'll see your uncle again, and Happy, and Colorado Bill. At least I hope so. But it's a very dangerous route they have chosen, is it not?" he added, turning to Mr. Christian.

"Exceedingly dangerous," was the reply. "But

Engleman leads the party. He will take no risks. I think we can hope for the best."

"That's capital news, Blank," said Petromelinski.

"I am especially pleased to hear that Awake-in-the-Night will join us. From what you tell me, he knows all about the location of Smith's California mines, and can lead us to all of Smith's hiding-places."

"Awake-in-the-Night can lead us to the mesa if we can only persuade him to do so," remarked Rob.

As soon as Rob began talking about the mesa, Petromelinski, turning to him, said:

"Tell Mr. Blank and me all about this place. I understand this is where you saw a man you recognized as your father, with another man, standing on the edge of the mesa when you were in the Colorado Desert. Tell us everything about it; don't leave anything out."

"Shall I also tell you about my dream?" inquired Rob.

"Yes, tell us all about it," was the reply.

Rob then related the story of his dream.

"I dreamed," he said, "that our party had left Philadelphia for the Southwest with Professor Engleman and Mr. Christian. I thought we had reached Yuma and had traveled across the desert for two or three weeks. One night, while lying in my blanket, I thought I quietly arose, mounted my horse, and left camp.

"I rode rapidly across the desert toward the northwest. After traveling for a considerable distance I

distinctly saw a mesa rising abruptly from the level plain. It was an oasis in the desert, for its top was covered by a growth of trees. In my dream I distinctly saw two men at the summit, one of whom I recognized as my father. My father seemed to recognize me, and I thought I could hear him shouting. For more than an hour I rode around the vertical walls of the mesa in a vain effort to reach the summit. At last I discovered a gully, or arroya, on one side of the precipice down which a good-sized stream of water was flowing. I could distinctly see in my dream that this stream sank into an opening in the ground.

"Dismounting from my horse, I commenced climbing the arroya. It seemed that I would certainly reach the top of the mesa, when I suddenly awoke.

"Unlike most dreams, this so deeply impressed me that I had no difficulty in recalling the appearance of the mesa; so that, as I informed Happy, I was sure of being able to recognize it should I ever see a mesa like it."

"I understand, Robert," said Petromelinski, "that you afterward saw a mesa in the desert you distinctly recognized as that of your dream, did you not?"

"I did," was the reply, and then Rob told the story of how he and Happy, accompanied by Colorado Bill, had seen a mesa that he immediately recognized as the one he had seen in his dream.

"What reason have you for believing," inquired Petromelinski, "that Awake-in-the-Night knows anything about the presence of gold on this mesa?"

Rob then related how, while Happy was confined to the camp from an injury to his ankle, Awake-in-the-Night had left the camp and returned, bringing to him unusually fine specimens of gold ore.

Both men were greatly interested in what they heard, especially when Mr. Christian assured them that he had seen some of these specimens, and that they were unusually rich.

"This is very important news you are giving us," Blank said to Rob. "Ivan, we must visit that mesa the first opportunity we have."

CHAPTER XXV

A New Use for a Baseball

Mashinsky was having a hard time. His contemptuous treatment by Smith and his cruel usage by the Indians made his life a burden. The Indians had never treated him fairly, but now that Smith had ordered them to keep him always among them, never to permit him to have a gun or a revolver, and to shoot him should he make an attempt to escape, they treated him more cruelly than ever. It was to him that the hardest and most disagreeable camp work was assigned, and when meal-times came he only got what the others refused to eat, and not much of that. He became increasingly angry and resentful, but he was bright enough to conceal it. As matters grew worse instead of better, he determined to make an attempt to escape.

But there was an angrier man in camp, and this was Joseph Smith. He was still smarting under the trick the detectives had played on him. His anger so warped his judgment that he treated his men with unnecessary harshness, and on several occasions punished some of the Indians more severely than it was safe to do, since in this way he was inviting a mutiny. Hoping he could persuade some of them while smarting under unjust punishment to mutiny in desertion, Mashinsky cautiously approached them. He found, how-

ever, that he was playing a dangerous game. The men threatened to tell Smith, and probably would have done so had they not feared that he might suspect them.

In retreating, Smith adopted his old tactics of dividing his men into several separate parties, so that by taking different routes it became difficult for his pursuers to know which trail to follow. On one of these occasions after closely following the western bank of the Colorado River, for it was here he had some of his best hiding-places, Smith suddenly changed his route, turning abruptly to the west over the southern part of Utah, until he had crossed the boundary into Nevada, when, turning again to the south in order to avoid a recently constructed railroad, he resumed his route toward the Colorado Desert.

As usual, three of the Indians had been assigned to keep a lookout for Christian's party and to keep him posted as to their movements.

The Indians chosen for this purpose were the three who had also been ordered to keep a watch over Mashinsky.

This was the opportunity for which Mashinsky had been waiting.

"With but three Indians watching," he said to himself, "I ought to get a chance to-day to slip off. I'll risk it; if I am shot I'll only have my troubles over sooner. Some of these days," he said, "I'll get even with those detectives, as well as with that lad Happy."

The three Indians, accompanied by Mashinsky, were stealthily hanging on the outskirts of the pursuers.

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Fearing the scouts might get on their tracks, they had again adopted the plan of each going in a different direction, one of them, however, ordering Mashinsky to keep close behind him.

"Indian will shoot white man if he tries to get away."

"This is my chance," said Mashinsky to himself, and succeeding in slipping away from his Indian, ran rapidly in the direction of the camp of his pursuers.

The consequences attending this act will be related in due time.

So far the trail had led the pursuers close to the western side of the Colorado River. Smith had made the change in his route before alluded to, and had been going rapidly across the southern part of Utah toward the boundary of Nevada. He had abandoned the slow, irregular flight, and was pushing onward at a rapid pace. His pursuers, therefore, found it impossible to get anywhere in sight of him.

A railroad was to Smith an especially dangerous thing. He knew that descriptions of his band had gone out, and that the people would be on the lookout, and therefore he avoided the railroads where they were likely to be. It was for this reason that shortly after entering Nevada he again changed the direction of his flight toward the western bank of the Colorado, in the region of the great cañon. It was at this time that he had ordered his Indians to conceal and confuse his tracks, to watch the pursuers, and to send him word as

soon as they had again succeeded in tracking him. It was also at this time too, that Mashinsky had succeeded in escaping from the single Indian attending him, and was rapidly approaching the camp of the pursuers.

The portion of the Colorado along which Smith was then fleeing was where the river flows through the granite, in many places at distances of more than a mile below the surface. Here it was almost impossible to descend to the stream or to reach the surface from the river. Smith, however, knew of trails, here and there, by which he could take his party to hiding-places either along the river banks, or in deserted cliff houses on the sides of the high precipices forming the walls of the cañons.

The Indians had been so successful in covering their tracks that the four cowboys to whom the tracing of the pursued had been left, came to Christian and his friends, and said:

"Gents, we fellows be tarnation sorry to say that we hev completely lost the tracks of these fellers that will help us to catch them. It is not that no tracks kin be found, but that be too many, all a-going in different directions."

"What had we better do?" inquired Christian, addressing the speaker.

"Well, we calculate you had better have us follow four different tracks for a while. Then we'll meet, and each fellow will tell what he has seen. We reckon

in this way we can pick up the true trail. Then we can all follow it again."

"Can we help you in this work?"

"I reckon, gents," said the man, with a smile, "the best way for you to help us would be to leave us alone. We can go faster and better alone than if you were with us. There's a good place for a camp not far from here. If you'll stay in camp for two days while we're around picking up tracks no time will be lost."

"What do you say, gentlemen?" inquired Christian of Mr. Francksen and the detectives.

"Do what the men advise," replied Blank.

"Two days' rest will put our horses in condition and prepare us for the long pursuit I think we have before us," said Petromelinski. "It does not look as if we can catch up with that fellow before he reaches the Colorado Desert."

The camp was selected. After giving their horses a short rest the cowboys rode off together. They soon separated, each following separate trails.

The rest they got in the camp was very pleasant to them all. It requires the expenditure of no little physical energy to ride horseback, going at a rapid gait, for ten or twelve hours a day, day after day, as they had been doing for the last four weeks.

Their camp was located in a part of Nevada where the streams, fed mainly by springs that had their sources in some of the higher mountain walls, instead of emptying in rivers that found their way eventually to the ocean through the Colorado, had collected in

small lakes in the lowest parts of basin-shaped valleys. These inland bodies of water were of the same general type as Great Salt Lake. They are everywhere surrounded by higher land, so that when once collected in them the waters could escape by evaporation only. Since all water flowing over or through the ground dissolves out small quantities of saline substances, and the water that escapes into the air by evaporation contains none, the water of these lakes is always very salt.

Their camp was located near a spring, the waters of which were not yet much impregnated with salty substances, and were therefore fairly good for drinking and cooking purposes.

Like the men of the party, the boys welcomed the rest, for they were all very tired. As is often the case in healthy boys, they recovered from their tired feeling long before the men did, and soon found lying around the camp tiresome. Therefore, obtaining permission to take a stroll in the neighborhood, Norman and Fred, calling to Rob, said:

"We're going for a short walk, Rob. Will you go with us?"

"Yes, a part of the way with you," was the reply; "but I wish to visit the shores of the lake a short distance below. Mr. Christian tells me that fine crystals of gypsum, common salt, and other minerals are frequently found on the shores of such lakes."

During this, as well as other examinations of the shores of existing salt lakes, as well as the beds of

dried-up lakes, Rob and the other boys obtained beautiful crystals of selenite, or gypsum; halite, or crystallized common salt or sodium chloride; sylvite, or crystallized potassium chloride; as well as crystals of magnesium chloride.

At other places they succeeded in obtaining specimens of borax, or sodium borate, a very common mineral in certain portions of the desert regions; thenardite, or sodium sulphate; mirabilite, or Glauber's salts, a hydrous sodium sulphate; and natrolite, or needle zeolite, a sodium and aluminum silicate.

In addition to the above, Professor Engleman called their attention to the fact that chlorine, bromine, and iodine, combined with such metals as silver, etc., so that while visiting some of the mines in the locality they obtained specimens of cerargyrite, or silver chlorite. The last named mineral is sometimes named horn silver from its peculiar color.

When Fred asked permission of Mr. Francksen to go with the boys, that gentleman said:

"Why do you wish to be walking around? Why don't you take the opportunity of resting as the others are doing?"

"We want to get a little exercise," was the reply.

"Exercise!" exclaimed Mr. Francksen, laughing; "I should think the way you have been riding at breakneck pace over the country the last week or so would satisfy you. I should think every joint in your body would feel sore. I know mine does."

"But, Mr. Francksen," replied Norman, "it's a

different kind of exercise we want. If we can get a chance of stretching our limbs, a short walk will rest us."

"Very well, have your own way. But don't go far from camp."

They had their revolvers and rifles with them when they started, and the question arose as to whether they should take them. It was a hot day, so that although they had gone a short distance, they very foolishly determined to go back to camp and leave their weapons.

"You see, we don't expect to go very far," said Fred, "so I guess it'll be safe."

On reaching the camp instead of going to where the others were still resting, they handed their weapons to Sam Lung, who was getting supper, and asked him to keep them until they returned.

When Rob reached the neighborhood of the lake he began looking for crystals of gypsum and common table salt, while Norman and Fred went on farther, and were soon out of Rob's sight by climbing over a low hill that formed one of the boundaries of the lake Rob had gone to examine.

As Fred and Norman walked side by side they presented a strange, indeed almost ludicrous, contrast. As is known to the readers of the first volume of the series, Fred was long and slim, and his legs and arms were of an unusual length. He had long, light-colored hair that hung far down over his shoulders. It had been bad enough in Philadelphia, where his visits to the barber were few and far between, but he had never

gone to the barber since he came West. Though far from beautiful, Fred's hair was fine in texture, and when blown by the wind, or tossed to and fro by any unusual bodily motion, it had a way of flying in all directions, causing it to resemble an odd kind of head-dress. The locks falling in front every now and then fell over the lad's eyes, and would have almost blinded him had it not been for a peculiar knack he had of skilfully throwing them aside by a quick motion of his head. This motion served also to cause them to fly out as the headdress above referred to.

But besides the above, Fred's small steel-blue eyes were scarcely ever at rest. They were constantly moving in all directions. Nor was this useless, for but very little passed in Fred's neighborhood that he failed to observe.

Still another thing that added to his peculiar appearance were light-colored eyebrows and lashes, so nearly the color of his face that at a short distance they were almost invisible, and hence a casual look seemed to show that the lad had nothing with which to protect or cover his small, restless eyes.

Though life in the open air had somewhat improved Norman's general health, he still had the slim legs, slender arms, and thin body that had so especially characterized him when he first made friends with Rob, Happy, and Emil in Fairmount Park, as told in the first volume of this series. He still wore his large bifocal glasses, and when walking side by side with Fred the two presented a ludicrous contrast.

They were talking as they walked along, and the conversation naturally ran on the friends they had left behind.

"I miss Happy very much, Fred," said Norman.

"So do I," was the reply, "but I guess he and the others will get back here all right. You know what a bright man your uncle, Professor Engleman, is. If other people have been able to get safely through the Colorado Cañon I don't see why he should not."

Fred, as will be remembered, was a great baseball enthusiast. As can readily be imagined, he had no opportunity whatever to indulge in this liking since leaving Philadelphia. After walking together for a few moments in silence, Fred turned to his companion and said:

"My, how I'd like to have a game of baseball; wouldn't you, Norman?"

"I'm not much on baseball, Fred," said Norman. "Still I have learned to like it."

"How would you like to have a game of catch now?" inquired his companion.

"I'd like it well enough if we only had a ball. I wouldn't care to try to stop one of these pebbles," pointing to some rounded agate pebbles about the size of baseballs that were lying on the ground near them.

"You don't have to," said Fred, as with a smile he drew a baseball from a pocket of his coat. "I brought several balls from the East with me. I thought it might be possible to get into a game now and then, but I've never been able to do so. See, this ball is quite

new. It's a regular Association style. Suppose we play at catch. I would like to see if I've forgotten how to put a curve on a ball. As you have no mitt I'll not throw it too hard. Stand where you are and I'll go off a little distance and give you some balls."

The boys greatly enjoyed tossing the ball between them, and became so interested in what they were doing that neither of them saw anything but each other and the ball as it was rapidly passed between them. Fred, looking up for a moment, however, saw Mashinsky coming toward him.

"Quick, Norman, look back of you!" he cried.

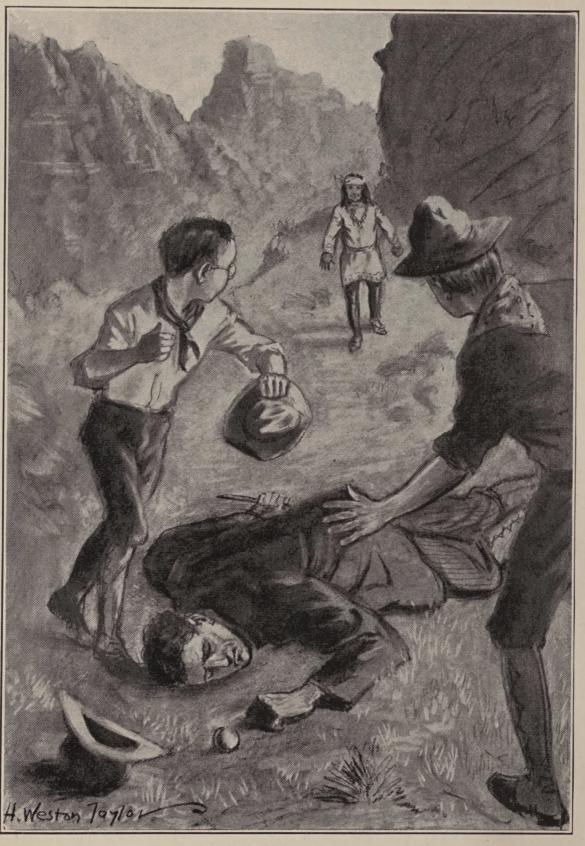
Doing this, Norman saw that Mashinsky was running rapidly toward him with a drawn stiletto in his hand. There was no doubt he meant mischief. He had recognized the lads and determined on taking revenge for what Happy had made him suffer.

"I have you now, you young rascal," he called to Fred. "I'll pay you for the trouble you gave me at the lapidary's in Philadelphia."

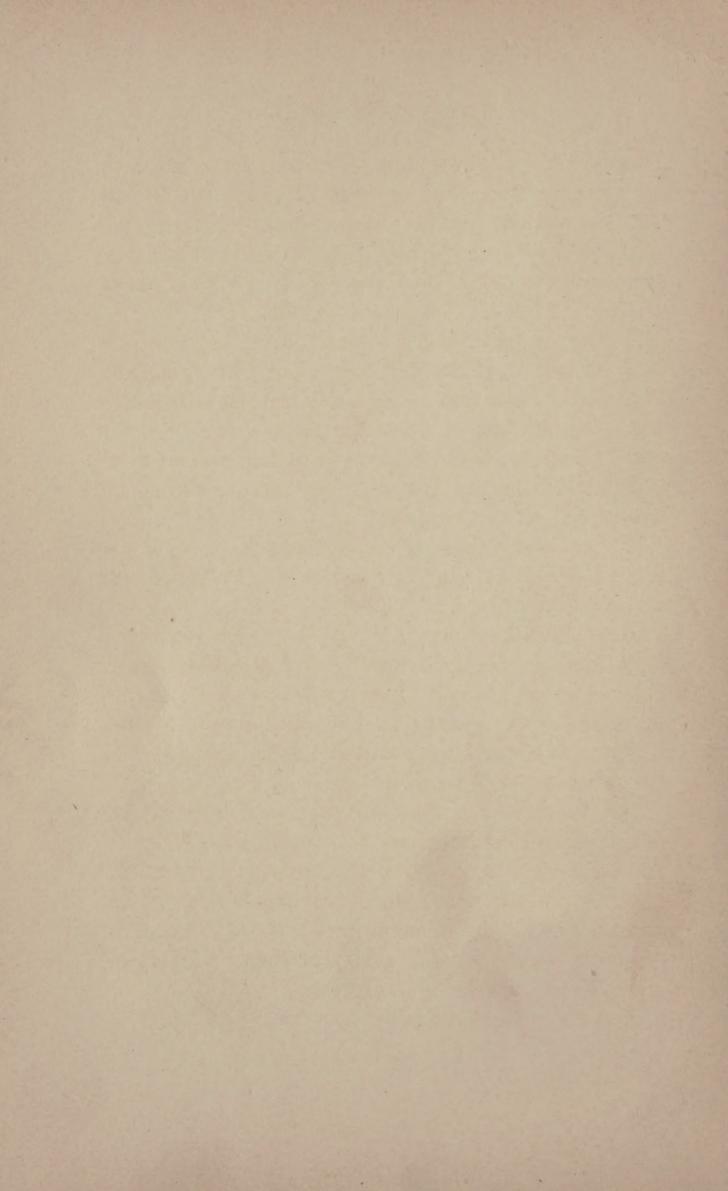
"What shall we do, Fred?" cried Norman. "Shall we run?"

"Why should we run?" exclaimed Fred. "We ought to be able to manage that fellow. We're two and he's but one."

"Be careful, Fred," cried Norman, "he has the same stiletto in his hand with which I imagine he killed the man in Salt Lake City." And then a happy idea occurred to Norman, and he cried, "But I say, Fred, let that fellow have a hot ball straight at his head.



"But he made no allowance for the curve" Page 315



I know you can throw it straight and throw it hard. If you once strike him with an extra-hot ball it will put him to sleep, and we can get his stiletto and take him a captive to the camp. I say, would not Mr. Petromelinski and Mr. Blank be glad to get their hands on him."

"That's a great idea, Norman," said Fred, and placing himself as if pitching in a game of baseball, he let his long right arm swing out, when the ball, shooting from him almost as if shot out of a gun, flew toward Mashinsky with, however, a strong in-shoot to it.

When Mashinsky saw what the lad was doing, he smiled and said to himself:

"If that long-legged fellow thinks he can hit me with that ball he is greatly mistaken. I'll show him how easily I can dodge it."

But Mashinsky was not up in the mysteries of curved balls. Seeing it coming in a direction he calculated would bring it at least a foot to the right of his head, he remained still, intending as soon as the ball was past to rush forward and strike the larger of the two boys with his stiletto.

But he made no allowance for the curve. As it neared him the ball suddenly took a change of direction and struck him squarely on the forehead between the eyes. It was a hot ball. Moreover, it was a heavy Association ball, that when properly thrown is capable of giving a severe blow; and on receiving it, Mashinsky instantly fell senseless to the ground.

Running toward the fallen man the boys were about

taking the stiletto from the hand that still grasped it, when, looking up, they saw an Indian coming toward them. This so astonished them that they began to yell, and, probably because the throwing of the baseball had recalled it to them, they gave at the top of their voices the baseball cry they had often practised at match games in Fairmount Park.

It was one of those ridiculous cries that mean very little but sound very terrible. In the excitement of the moment they began to dance, greatly to the astonishment of the Indian. The odd appearance of the lads, together with what seemed to the Indian a warwhoop, and the strange method one of them had adopted for knocking the man senseless, appeared to greatly frighten him. Possibly he thought they were some new kind of medicine men. Stooping down and taking the stiletto from the man's hand, he turned to the lads and said assuringly:

"Indian friend of white lads. This man Indian's prisoner; Indian must take him again. Look," he said, pointing in the same direction as that in which he came, "another Indian coming."

The other man coming up the two began talking in the Indian tongue.

It was evident that both were no little influenced by the appearance of the lads, and especially by the strange manner in which they had knocked Mashinsky senseless. They appeared to be uncertain whether or not they should take them captives or let them go their way. The fact however, that they were so near the

camp of the pursuers, led them to the conclusion that it would be safer to return with Mashinsky and let the lads go free, especially since Smith's orders had been so positive that no harm was to be done to the pursuers. Turning to the boys, the Indian whom they first saw said:

"White lads can go. Better go heap quick before Joe Smith or any of his Mormons see you."

"All right," said Fred, "we'll go." So, taking Norman by the arm, the two left at a rapid gait.

There was great excitement in the camp on their return about half an hour afterward.

"It's a pity, boys," said Petromelinski, "that the Indians came up when they did. Had you been able to bring the man here as a prisoner it would have been a great feat. However, the Indians have the fellow back again and I imagine they are leading him a miserable life."

"Do you think any of our scouts will meet them?" inquired Christian.

"It is not likely," said Petromelinski. "These fellows know how to keep out of sight when they are watching an enemy."

On the return of the scouts, who had brought back the word that they had succeeded in picking up the lost trail, it was learned that they had not seen any traces of the Indians or of Mashinsky.

CHAPTER XXVI

Rob's Discovery of the Smoke Signals

THEY frequently met Indians of different tribes in the section, and the boys, especially Rob and Norman, had begun to take an interest in observing the habits and customs of these people.

The North American Indians generally lead a nomadic life. Although they sometimes dwell for a short time in one locality, they often change their abodes and wander from place to place. Our friends, therefore, had an opportunity of observing many different tribes, but those most frequently seen were the Apaches and the Utahs, or Utes, of Utah. These latter are members of the Shoshone tribe, and are sometimes known as the Pah-Utes or the Piutes.

One of the cowboys, a man of unusual size, who went by the name of Big Frank, and had taken considerable interest in the boys, especially in Rob, told them many stories about the Indians.

One day, while passing through southeastern Nevada, the boys observed a number of broad stones that had been placed about five feet apart, in rows, on both sides of a trail, that had apparently been used by some of the Indians who had erected their wigwams, or tepees, in the neighborhood.

"Do you suppose, Rob," inquired Norman, while

they stood examining them, "that these stones just happened to be arranged in this way?"

"I think not," was the reply. "You see, they have been placed at equal distances apart as well as on each side of the trail."

"I wonder why they have been put there."

"I don't know, Norman," was the reply. "Suppose we ask Frank to-night when supper is over."

"We saw something strange to-day, Frank," said Rob, as he and the other boys sat down near Frank that evening at the camp-fire, "and we have come to ask you to tell us what it means."

"I'll tell you all I can about it whatever it is," replied Frank, who was better educated than the average cowboy, and spoke fairly good English.

Rob then told him of the curious stones they had seen, and wondered why they had been so arranged.

"They are what are called marrying stones."

"I don't understand you," replied Norman. "What are marrying stones?"

"Do you know," inquired Big Frank, "what is meant by popping the question?"

"Of course I do," replied Norman, laughing. "It means asking the girl you have picked out from all the others you know if she cares enough for you to marry you. Ain't that right, Rob?" he said, turning to his friend.

"Don't ask me," said Rob, laughing. "Ask some other fellow."

"Then I'll ask you, Fred," said Norman.

"I can't help you," said Fred, laughing. "I know nothing about such matters."

"Tell us what you mean by marrying stones, Frank?" said Norman.

"Then listen and I'll tell you. I believe these stones are used by many Indian tribes, but especially by the Apaches. When a young Apache has made a selection of the girl he would like to have for a wife, he carefully studies the trail she uses while picking seeds, going for water, or attending to other work. He then picks out a portion of such trail at some distance from camp, and places a number of broad stones on each side, at equal distances apart, just like those you told me about. Choosing a time when he sees the girl starting off for the trail he purposely shows himself, and then running rapidly ahead, hides somewhere in the most secluded part of the trail near the marrying stones.

"The girl knows what is up. I need not say just how, for it is not difficult even for an Indian girl to know when a man likes her. He sees her coming along following her usual trail. The two rows of stones on each side of the trail say to the girl:

"'Do you care for me? Will you marry me?'

"If she does not wish him for a husband she carefully avoids walking between them. If she looks favorably on the suit she deliberately does so. As soon as the hidden suitor sees this he rushes from his hiding-place, seizes the girl, and carries her triumphantly to the camp."

The story appeared to please Fred, who was a bashful sort of a fellow.

"I call that a neat plan, Rob," he said, laughing. "Indians are not so slow after all. It would save a fellow a deal of bother. When he wants to know if his girl will have him or not, he places the marrying stones on either side of a trail she is apt to take and lets them speak for him."

"Yes, we understand, Fred," said Rob in a jollying tone, "the plan would suit you exactly. When you get back to Philadelphia you might tell your girl this story and see what she thinks about it."

"Quit your kidding," said Fred. "It will be many years before there will be any reason for my using marrying stones."

"You can never tell," said Frank, who had been greatly enjoying the conversation between the boys, "when you might want to use such a thing. I have not had any experience myself, for I am a bachelor, but I believe that when this kind of thing comes it comes very suddenly."

They were sitting by the camp-fire, and Frank appearing to be in a mood for talking the boys persuaded him to tell them something of his experiences in this part of the country during the Indian wars.

"Have you ever seen an Indian fight, Frank?" inquired Rob.

"Many a one," was the reply. "I have been in some of them myself, but most of the fights I have seen were between different Indian tribes."

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"Won't you tell us about the kind of weapons the Indians use?" asked Fred.

"Of course, you know," replied Frank, "that in the older times the Indians used the bows and arrows for fighting at a distance, and the tomahawk for close range. Nowadays, as you have seen for yourselves, bows and arrows have been replaced mainly by rifles."

"Don't the Indians carry bowie knives, Frank?" inquired Norman. "I think I remember reading about Daniel Boone, in Kentucky, and his big bowie knife. Was this weapon used there by Bowie for the first time?"

"No," was the reply, "it was used long before that. I believe as early as 1790. This knife was first used by Col. James Bowie, an Indian fighter of Georgia, who was killed in an Indian massacre in 1836, and was named after him. It is still used by the Indians in these parts of the world, but I think you will remember that those you have seen about here carry tomahawks more frequently than knives. You see," he said, "the tomahawk is handier for close fighting, since it can be used for striking blows, as well as taking the scalps of those they have killed."

"Is it true, Frank," inquired Rob, "that the Indians are generally good shots with the rifle? In most of the books I have read they were supposed generally to hit the mark. I have never seen them fighting against one another, but I have often seen them shooting at marks or at animals, and it has never seemed to me that they are very good marksmen."

"Right," said Frank, laughing. "While there are good marksmen among the Indians, I think that, as a rule, you can easily find better shots among the white people. You see," he added, "a steady hand and a good eye are necessary for straight shooting. If a fellow has neither of these, he never becomes a good shot. If he has them, he must shoot often if he wishes to become an expert. Now powder and ball, or loaded shells, cost money, and money is not very plentiful among Indians. It is nearly all the average Indian can do to get a gun by barter or purchase from the stores in the mining camps, so that there is generally but little left for ammunition. He shoots seldom and therefore is not apt to be much of a shot.

"Can any of you lads shoot well?" inquired Frank.

"Rob and Fred are pretty good at it," said Norman, but one of our companions, named Happy, whom we hope to see soon with Professor Engleman and Colorado Bill, is a wonderful shot." And then he told him some of the things Happy could do with a rifle or pistol.

"I heard tell of that chap," said Frank, "when I joined your party. I understand he is very quick and sure with both revolver and rifle. It's very convenient to be able to shoot well when passing through this country. The man who is quickest and is the best shot has the best chances of coming out of a scrap alive."

Speaking about shooting then led the conversation to bows and arrows and spears.

"Won't you tell us something about the different things Indians use for the heads of their arrows, Frank?" asked Rob.

"When the white people first came West the Indians only used arrow heads made of chips or splinters of agate, or other hard stones. They often use another kind of material," he added. "I don't know what it's called, but it looks like glass. It's not glass made by the white people, but a kind of stuff found in the lava beds."

"I believe it is called volcanic glass or obsidian," said Rob. "I have picked up some good specimens while crossing the lava fields."

"Of later years," said Frank, "arrow heads are made of many different substances. I have seen arrow heads that have been chipped out of green bottle glass, or from fragments of the insulators used on the telegraph lines extending along the side of a railroad. When properly chipped this material makes an excellent cutting tool, equal, if not superior, to arrow heads made of agates. I have also seen arrow heads made of flat pieces of steel, the edges of which have been sharpened either by a file, or by rubbing against sandstone."

"I have not seen many clubs carried by the Indians here," remarked Rob. "The Indians carry war clubs, do they not?"

"They do. Besides their knives, the Indian relies for close fighting on his potato-masher."

The boys laughed at this odd name for a weapon.

"What do you mean by a potato-masher, Frank?" inquired Norman.

"It's a short, heavy club, with a piece of quartz or glass stuck in one end. In the hands of a strong, skilled man it's a dangerous weapon, since a severe blow is apt to break the skull."

"What puzzles you, Blank?" said Petromelinski to his friend one night when all four gentlemen were seated around a camp-fire talking over the occurrences of the day. It was plain to be seen that something was worrying Blank.

"I've been trying to square something about our pursuit of Smith and his crowd, Ivan," he said, "but have been unable to do it."

"What is it?" replied Petromelinski. "Perhaps these gentlemen or I may be able to help you."

"I can't understand," replied Blank, "how the fellows we are chasing seem to know nearly everything about our movements. It almost makes me think they are able to telegraph to one another. Have you not noticed that no matter how careful we are when we have laid some plan to catch them they seem to have been perfectly posted?"

"I've noticed that, Blank," was the reply. "I have no doubt that they do telegraph to one another, but just how I cannot pretend to say. If we keep our eyes open," he continued, "we may be able to find out how they do it. Should we discover this it will greatly aid us."

Their camp that night was located on the side of one of the many mountains that cross southern Nevada. It commanded an extended view of several valleys as well as the slopes of other mountains.

When all in the camp but himself were asleep, Rob, who had been very wakeful, left his blanket in order to put a fresh log of wood on the fire. Looking toward the distant mountains he saw near its summit a column of smoke that would have been invisible were it not for occasional flashes of light that were thrown on it. Watching it for a few moments, he saw that these flashes followed one another at more or less regular intervals. He knew from the position of the mountain from which the flashes of light were seen, that it was at some distance from the Colorado River.

"I think the signals have been made by some of the men we have been pursuing," he said to himself. "They are using them as a kind of telegraph to inform their party what they have learned about our movements to-day. I'll call Frank. Indeed," he added to himself, "I'll call all our men. I'm sure they would like to see what is going on."

All, especially Petromelinski and Blank, were greatly interested in what Rob pointed out to them. Not only did the flashes of light continue, but at last they saw on a mountain near the river similar flashes of light and smoke columns. While watching, there suddenly came from the answering second mountain a flash of light that suddenly rose in the air and left a trail after it until it fell into the valley below.

"What do you make of that, Frank?" inquired Petromelinski of the guide. "Does it not mean that the men are signaling to one another?"

"That's just what they're doing," was the reply. "I imagine the Indians who have been watching us to-day are sending in a report to that fellow Joe Smith over there by the river."

"Have you any idea how they made that fireball, Christian?" inquired Francksen, who was not well posted in such things.

"They have evidently tied some combustible material, such as a piece of resinous wood, to an arrow, ignited it, and shot it in the air," replied Christian.

"That's all right," exclaimed Blank, "but what does that arrow mean? That's what I'd like to know."

"It might mean anything these fellows have agreed on," replied Frank. "These Indians are by no means lacking in intelligence. They could readily determine on a number of signals that could be given by so unusual an object, and this especially when aided by so bright a fellow as Joe Smith?"

"I think, Blank," remarked Petromelinski, "that if we watch we may be able to make a good guess as to the meaning of the flaming arrow. Yes," he continued in a delighted manner, pointing toward the mountain where Rob had first observed the flashes of light, "I told you so. Look."

Looking in the direction pointed out by Petromelinski they saw another flaming arrow from the first mountain rise in air and move toward their camp-fire.

"I can square it now," said Blank. "The first arrow probably meant, 'We understand your signals. Where are our pursuers?' Of course, they can see the camp-fire, but cannot be certain it is ours. The second flaming arrow meant, 'They have gone over in that direction.'"

They watched for a half-hour or so longer, but no further signals were seen from either mountain. The information, whatever it was, had evidently been passed from mountain to mountain.

What they had seen greatly interested both of the detectives, who sat for a long time around the fire talking about what they had seen.

"Ivan," said Blank, "I'd be willing to plank down a big sum of money to be able to read the messages that are almost certainly being sent between the mountains."

"I have no doubt," replied Petromelinski. "It would be of so great value to us that you would be justified in paying well for the information. If Awake-in-the-Night were here I believe he would have no difficulty in reading those signals for us."

"I'll remember that," was the reply. "As soon as Awake-in-the-Night joins us, we'll ask him about them; that is," added Blank, "if he ever reaches us."

"Yes, if he ever reaches us," added Petromelinski. "For my own part I think he will."

While in the region of the Grand Cañon of the Colorado, the Christian party was again compelled to make

marked changes in their speed. The trails could be traced to the edge of the cañon when they completely disappeared. Nor could they find any place to descend to the stream below, for the pursued had concealed their true trails and left false ones. While in all cases their trails were picked up again, this often did not happen until a day or so had passed. These delays greatly worried the pursuers.

"At this rate," exclaimed Petromelinski, "Awakein-the-Night and Engleman will have completed their voyage through the cañons and reach Yuma, or some place on the river north of Yuma, before us."

"We can prevent that, Ivan," said Blank, "by sending one of our scouts to the nearest station along the railroad and send a telegram to Engleman, letting him know we are on our way."

This was done, a request being left that the message be repeated and delivered to a party of five white people and an Indian, who were coming down the cañon in two boats. They knew that this voyage was so unusual that the appearance of boats on the river from the north would not fail to be observed.

CHAPTER XXVII

COMING OUT OF THE CAÑON. MEETING OF THE PARTIES

ENGLEMAN and his companions had passed through so many hardships that they thoroughly appreciated the luxury of floating down the river in their boats, especially since they were now carrying abundant food supplies for several weeks.

We will not attempt to follow the remainder of their journey through what, as my readers will now understand, has not inappropriately been called the "Jaws of Death," since on so many occasions they had barely escaped being swallowed up by the angry waters of the great river.

The granite walls were not now so high as farther up the river. They might hope before long to pass out of the granite. This opinion was confirmed by Awake-in-the-Night, who said:

- "Soon river not so angry, but heap bad in places yet."
- "If we have been able to pass the many dangerous places, we ought to go safely down the rest of the way if we are careful, should we not?" said Engleman to the Indian.
- "White man right," was the reply. "Keep heap watch, go through all right."

As they afterward discovered, there were still many dangerous places to be passed; places where they would have been capsized or dashed to pieces had it not been for skill and courage; but the experience they already had had stood them in good turn for these emergencies.

In order to give my readers some idea of the nature of the dangers through which they either had already passed, or through which they had still to go, I will quote the following from Major Powell's description of how he took a number of boats over this route. He is describing how he once succeeded in getting his boats through dangerous rapids:

"This morning we find we can let down for three or four hundred yards, and it is managed in this way. We pass along the wall by climbing from projecting point to point; sometimes near the water's edge, at other places fifty or sixty feet above, and hold the boat with a line, while two men remain aboard and prevent her from being dashed against the rocks and keep the line from getting caught on the wall. In two hours we have brought them all down, as far as it is possible, in this way. A few yards below the river strikes with great violence against a projecting rock, and our boats are pulled up in a little bay above. We must now manage to pull out of this and clear the point below. The little boat is held by the bow obliquely up the stream. We jump in, and pull out only a few strokes and sweep clear of the dangerous rock. The other

boats follow in the same manner and the rapid is passed.

"It is not easy to describe the labor of such navigation. We must prevent the waves from dashing the boats against the cliffs. Sometimes, where the river is swift, we must put a bight of rope about a rock to prevent her being snatched from us by a wave; but where the plunge is too great, or the chute too swift, we must let her leap and catch her below, or the undertow will drag her under the falling water and she sinks. Where we wish to run her out a little way from shore, through a channel between rocks, we first throw in little sticks of driftwood and watch their course to see where we must steer, so that she will pass the channel in safety. And so we hold, and let go, and pull, and lift, and ward among rocks, around rocks, and over rocks.

"And now we go on through this solemn, mysterious way. The river is very deep, the cañon very narrow, and still obstructed, so that there is no steady flow of the stream; but the waters whirl, and roll, and boil, and we are scarcely able to determine where we can go. Now the boat is carried to the right, perhaps close to the wall; again, she is shot into the stream, and perhaps is dragged over to the other side where, caught in a whirlpool, she spins about. We can neither land nor run as we please. The boats are entirely unmanageable; no order in their running can be preserved; now one, now another is ahead, each crew laboring for its own preservation. In such a place we

come to another rapid. Two of the boats run it perforce. One succeeds in landing, but there is no foothold by which to make a portage and she is pushed out again into the stream. The next minute a great reflex wave fills the open compartment; she is water-logged and drifts unmanageable. Breaker after breaker rolls over her, and one capsizes her. The men are thrown out, but they cling to the boat, and she drifts down some distance alongside of us and we are able to catch her. She is soon bailed out, and the men are aboard once more."

The above describes admirably some of the many experiences our friends had not only between the granite walls, but also in other portions of the stream. They knew by experience that the most dangerous parts of the stream were not only where the current was swift, but where a sudden change occurred in its direction; for, in swift waters, an abrupt bend in the river made it difficult to prevent the boat from being thrown against one of the side walls, and made it impossible to see the dangers ahead of them.

It was a happy day when, for a time, they ran out of the granite and entered the limestone. At this point the river for a considerable distance was deep and rapid, so that they were able to pass over more than ten miles in less than five hours. But they are not yet completely out of the granite. Here and there the granite walls appeared where the river cuts its way through places where the granite is again the surface

rock. But the current is swift and the channel free from rocks, so that the run for the remainder of the



A Scene on the Canon of the Colorado

day adds another ten miles to their credit, and before long they are again passing through the limestone.

Though less elevated, the walls are still twenty-five hundred feet in height. The river is now carrying them along with great rapidity, and it begins to look as if they may not be so long behind Christian and his party as they feared.

It was during this portion of their course that they passed through a region where they saw great monuments of hardened lava standing in the river. Although erosion had cut most of these down, some of the remaining shafts were over a hundred feet in height.

As they passed down the river, they knew by the increase in the number of lava shafts that they were approaching the openings through which, long ago, the molten rock had escaped from the interior; for the cooled lava columns and the cinder cones, on each side of the stream, had greatly increased. Suddenly they came to a cataract which they were able safely to pass by means of a portage. Here, oddly enough, they could see, standing on the very edge of the cañon, the well-defined crater of an extinct volcano.

"Do you think the lava through which we have passed was thrown out from that crater, professor?" inquired Happy.

"So far as I can see, I think it was," was the reply. "For one to be certain would require an examination of more of the country around here. There may be fissures on the side of the volcano through which much of the lava escaped. I think it probable, however, that most of it came from the crater."

"It must have been a splendid sight," exclaimed Happy, "if, as I suppose was the case, the lava flowed into the river when it was filled with water."

"There is no reason for believing the river was dry when the eruption occurred," replied the professor. "If you remember the basalt we saw high up on the opposite walls of the cañon we passed a few miles back, you can see that the lava drove the water out of the channel, backed up in the stream, and finally poured over the wall as a fall of molten rock.

"I should greatly like to examine this region, Brown," continued Engleman. "As you can see, there has been a great fissure or fault in the strata here. The lava cone is situated along the line of this fault."

"I don't understand what keeps the surface water from flowing into these faults before it reaches the river, professor?" remarked Happy.

"Nothing prevents it from doing so," was the reply.

"In point of fact, it does drain into the faults. As you will see, great springs flow out from this crevice and pour into the river a volume of water almost equal to that of the Little Colorado."

The opportunities they had for studying the peculiarities of lava flows in this portion of the stream meant nothing to Awake-in-the-Night, to Colorado Bill, or to Pete, but were not lost on Mr. Brown, Professor Engleman, and Happy; but I will let what they saw be told by Mr. Powell, in his "Explorations of the Colorado River." (See Appendix, "Lava Flow.")

Although the cañon walls were again becoming

higher, the river remained comparatively free from obstructions, and they were able to continue to make rapid progress, passing over distances of thirty to thirty-five miles in each day. At this rate they would soon be at the end of their dangerous journey. They had, however, a number of rapids and falls to pass, and had at last succeeded in passing a dangerous rapid when Awake-in-the-Night, who had been scanning the western bank of the river, suddenly motioned them to take the boat under a projecting portion of the wall, beckoning to Mr. Brown's boat to follow him. At the same time he threw himself down in the bottom of the boat, motioning to his companions to do the same, and putting his hand to his lips as a signal for silence.

"What is the matter, Awake-in-the-Night?" inquired Engleman in a low tone.

"Indians and white men on cliff," he said, pointing to a part of the western bank of the stream at some distance from them.

Engleman and Happy looked in the direction indicated.

"I can see nothing," said Engleman.

"There they are, professor," said Happy, pointing to the place the Indian had designated.

"If white man look through his magic glasses he

can see heap better," replied the Indian.

"That's so, Awake-in-the-Night," replied Engleman; and using his glasses he remarked: "Now I can count three Indians and two white men."

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"What is it?" inquired Colorado Bill, whose boat had been brought by Mr. Brown alongside of the other boat, under the rocks.

There was no need of telling these men to hide. Both Bill and Pete, as well as Mr. Brown, suspected what was up when they saw the position of the boats.

"Look through my glasses, Bill," said Engleman.

"And you take mine, Pete," exclaimed Happy.

"It be some of them Mormon fellers," exclaimed Pete. "Shell I drop one of them with my rifle?" he inquired of the professor. "I kin do it from here."

"No," was the reply; "do not think of shooting."

"Ye be right," said Colorado Bill; and then turning to Pete he said: "Whatever else ye do, Pete, don't shoot. It be true we kin drop 'em from this place, but ef ye do a little thinkin' ye kin see the position we be in with a crowd of fellers, five or six times ez many ez we be, creepin' along the edge of the river and poppin' at us when they could do so without giving us our turn. Thar wouldn't be much left of us afore long."

"Heap right, Bill," said Awake-in-the-Night. "No shoot now. Soon we join our friends above and put up big fight. Maybe too, we get other white men further down the river to help."

"I reckon ye be right, Bill," said Pete; "but when thet air fight do come I want ye to count me in, especially when thet feller Joe Smith be around."

"Do you think they have seen us, Awake-in-the-Night?" inquired Engleman.

"Awake-in-the-Night no tell, but he has watched these men long time. Thinks they have not seen us."

"I reckon," said Colorado Bill, especially addressing Professor Engleman, "we'd better not think of going on now, but wait here easy like until they go away."

"Colorado Bill right," said the Indian. "Wait here."

It was late in the afternoon, about the time when they would generally start their camp-fire for the cooking of supper.

"Ef course, gents," said Colorado Bill, "ye don't hev to be told thet ye'll eat a cold supper to-night, ez it would be dangerous to start a fire with those fellers around."

This was so evident that the professor simply nodded his head to indicate that he agreed with Bill.

When supper was over, Awake-in-the-Night said to Engleman:

"While Joe Smith near the side of the river we better travel at night and rest during day. You think so?" he inquired, turning to his companions.

"What is your opinion?" asked Engleman, turning to Bill and Pete.

"It don't take no time to answer that air question," said Bill. "Ef course we travel by night. I reckon that be not a-many falls or rapids now. Be thar?" he said, turning to the Indian.

"Not many," was the reply.

They found but little difficulty in traveling by night;

for before long they passed out of the cañon and had reached a comparatively level land of the lower plains. They were now in a valley with low mountains to be seen in the distance. At last, after all their many dangers, they were still living, although they had passed through the "Jaws of Death."

"Can we travel now by daylight, Awake-in-the-Night?" inquired Happy.

"Not now," was the reply; "but soon. Small cañons below. When we pass them can go again in daytime without being seen."

Some days afterward, while passing one of the larger towns on the Lower Colorado, north of Yuma, they saw a man on a horse rapidly approaching the western bank. He waved a piece of paper in his hand, and was evidently trying to attract their attention. Awake-in-the-Night was the first to see him, and called the attention of those in his boat to him.

"Professor," said Happy, who had been looking at the man, "I think the man has a telegram in his hand. Yes," he added, after looking at him through his glasses, "it is a telegram."

They pulled the boat to the shore, when the man approached and said:

- "Any of you named Prof. Joseph Engleman?"
- "That's my name," said the professor.
- "Then I have a telegram for you," replied the man, but before the professor had time to open it, he added: "We people down here heard that two boats started down the Colorado from where the Green and the

Grand meet. None of us believed you would get through alive. There's been great talk of it all along the river. Glad to see you here all right; but I won't say anything more," he added, "until you read that telegram."

"It is from Christian's party," said Engleman, reading it, "signed by Blank. Listen to this," he said, turning to Mr. Brown. "Like ourselves, Christian and his party have been detained by various causes. They have been fearing we would get ahead of them just as we feared they would leave us far behind." He then read a short telegram from Blank, reciting the principal news, stating how Smith had led them a far from straight chase; that they were now going down the western bank of the Colorado; and that if they did not meet them before the telegram was received they could see them by going straight on to Yuma.

"Then," said Engleman, "that is what we will do. We go directly to Yuma and await our friends. What do I owe you for bringing me this telegram?" Engleman inquired of the man who brought it.

"If you will look at that telegram you will find it marked paid," replied the man.

"I noticed that," replied Engleman; "but what I mean is what shall I give you for the trouble of coming here from the telegraph office?"

"I reckon, stranger, that I'll not charge you for that. We people down the river know that you are after that fellow Joe Smith and his band of Indian cutthroats, to set free two white men they have been hold-

ing as prisoners. I want to do what I can to help you in this fight and, onless I am very wrong, you will find a lot of other fellows who want to do the same thing."

"Thank you very much for your kindness," said Engleman.

"I reckon," said the man, "that those who sent this message will be following you before long. If you have any message you can give me I'll be glad to see that they get it."

"I will leave a letter," replied Engleman, "that I will ask you to give them when they pass if you expect to remain here, or to leave it with some one to give to them."

"I shall be around these diggings for some time," said the man.

"I have directed this letter to Mr. John Christian," said Engleman. "If he is not with them give it to any of his party. You can also tell them that we escaped all the dangers of our passage through the cañon, and have gone direct to Yuma, where we will wait for them."

CHAPTER XXVIII

AGAIN IN THE COLORADO DESERT

While Joseph Smith and his band continued along the western banks of the Colorado, the pursuers had no difficulty in following them. The trouble began when, as soon as reaching the region where the river leaves the plateau and flows through the lower country, Smith again turned to the southwest, thus taking a direct route to the northeastern part of the Colorado Desert.

Now that the pursuers had discovered the method of telegraphing by smoke and fire signals, they watched for their repetition. Nor did they watch in vain. On several nights they again observed these signals, but at the best they could only guess at their meaning.

On the night when Smith's party had reached the southern edge of the plateau, and was about descending into the lower lands, where the river flows through a broad valley, they were encamped on the slope of a mountain where they had an uninterrupted view to the west and south. A full moon was about setting. Big Frank, who was with them, remarked:

"When that moon goes down and the night grows dark, I think we will see signals sent between Smith's main camp and the camps of his scouts."

"What camps are you speaking about, Frank?"

"Those three camp-fires," he replied, pointing successively to the west, the southwest, and the south. These places were situated on the slopes of low mountains.

As they sat patiently watching the distant camp-fires, flashes of light were suddenly seen illumining a smoke column that was rising from the western fire. The flashes continued for about a minute when they were answered by flashes from the fire on the southwest, and these were eventually answered by the fire on the south. The scouts were evidently sending in their reports to the main camp for the day.

"I think," said Frank, "the scouts will now ask what direction they shall take."

"What makes you think they will change their direction, Frank?" inquired Christian.

"Because they are now near where the Colorado enters the level country. If, as you believe, they are making for the Colorado Desert, they will probably strike across the country here toward the southwest."

At this moment a flaming arrow, shot almost vertically into the air from the camp on the west, carried a trail of light after it and then fell to the ground.

It was almost immediately followed by a similar arrow from the camp on the southwest, also shot upward.

"I think," said Frank, "an answer will now come from the main camp on the south. If I have guessed right this arrow will point out the direction that all parties are to take."

The words had hardly died on his lips when an arrow, evidently shot from a strong bow, carried a trail of fire after it as it rapidly moved high in the air toward the southwest.

"Ivan," said Blank to his friend, "I reckon Frank has squared it up all right."

"I believe he has," replied Petromelinski; "and very cleverly too."

"If your interpretation of the signals is correct, Frank," remarked Christian, "do you think they will wait until to-morrow before leaving this part of the country?"

"It is hard to say," was the reply; "but if you ask me to guess, I will guess they are more than likely to break camp to-night. However," he added, "we will soon be able to make a good guess as to whether they do this or not."

"How do you figure that out?" inquired Blank, ready to learn anything that might be of use to him in future work.

"Because," was the reply, "if they leave, their camp-fires will die out."

"Of course the fires will die out," said Blank, more to himself than to Frank. "I might have thought of that."

An hour afterward the fires gradually dimmed and at last entirely disappeared. It was evident that they had been abandoned.

By the early morning light they could, by the aid of their glasses, see a body of men riding rapidly over

the lowlands toward the northwest, though they had difficulty in making out who they were.

"They are too few to be Smith and his band," remarked Christian. "They may, however, be one of the bands of scouts. Take my glass, Frank, and tell me what you think."

Frank almost instantly returned the glass to Christian, saying:

"I think this is one of Smith's scouting parties. They appear to be going pretty quickly, so I imagine the other fellows are far ahead of them."

"We must make up our minds now what to do, gentlemen," said Christian. "Shall we follow them, or shall we go straight to Yuma and wait there for Engleman and his party? What do you think?" he said, turning to the detectives.

"I say make straight for Yuma," said Blank. "How is that, Ivan?"

"The answer is easy, Blank," was the reply. "Just now we badly need two things. The first is more men, and the second is a guide who knows Smith's party and their ways; this will be Awake-in-the-Night. He probably knows most of Smith's hiding-places in the desert and can be of great help to us."

"It may be possible, gentlemen," said Mr. Francksen, "that Engleman and his party have succeeded in finding their way and have already passed on before us. Although we had a start on these people, and could easily have gone on before them; yet, since we were delayed considerably by Smith's change of route

and his many disappearances in the cañon, they may be ahead of us."

"Francksen reasons correctly," said Christian. "Well, we are all agreed to make straight for Yuma."

They descended from the plateau and were soon traveling along the western bank of the river. It was while they were following this route that they saw a man riding rapidly toward them. It was the messenger who had delivered their telegram to Engleman.

"Are you the gentlemen who sent a telegram to Professor Engleman?" he inquired.

"We are," replied Christian.

"Which of you is Mr. Christian?"

On being informed, the messenger handed Christian a letter. It was as follows:

"'My Dear Christian: Though directed to you, this letter is intended for all. I know you will all be pleased to learn that Colorado Bill succeeded in liberating Happy and joined us after you had got a start of four days on us."

"Hurrah for Happy!" shouted Rob. "We will see him again."

The shout that accompanied Rob's cheer showed how popular the lad was.

"'While we were puzzling,'" continued Christian, "how we could catch up with you, Awake-in-the-Night said that if we were willing to take the risk of passing through the Colorado Cañon, which he called the "Jaws of Death," he thought he could bring us out in the low course of the river in time to meet you."

"Now think of that, Ivan," said Blank. "We will find that Indian of great help when we reach the desert. He seems to know all the haunts of Smith and his band."

"He will indeed be of great help," was the reply. "You know Awake-in-the-Night formed one of his band."

"'A Mr. Brown, of Utah,'" continued Christian, "'assured us that Awake-in-the-Night was probably more familiar with this dangerous route than any man living. The same gentleman offered us the use of two boats he had built for the purpose of exploring the great cañons himself. He was willing to risk the boats and his life to go with us.

"'When we next meet, which I trust will now be soon, we will give you details of the hairbreadth escapes we have had, and how it is that we have safely passed through those "Jaws of Death" that so seldom let anything pass them alive.

"'The messenger who hands you this letter has delivered to us the telegram you sent us some days ago. He advises us to go straight on to Yuma.

"" We have concluded that it will be wisest to do this and wait there for you. The messenger assures us that considerable excitement exists all along the river about what Smith has been doing. He believes there will be no difficulty in raising a band of determined men to aid us in giving him his proper punishment."

Encouraged as they had been by the news of their

friends, they continued on their way down the river and were soon in Yuma.

There were great rejoicings when the two parties met. It was near sunset when Christian's party rode into Yuma. One might have thought, from the way the people turned out to meet them, that they were warriors returning from a successful battle; for they were received with hurrahs and many other evidences of rejoicing. Some of the men, pressing forward to take them by the hand, offered help if needed against Smith. The fact that white men had been treated so brutally by the hated Mormons made all eager to do what they could to prevent the recurrence of such an outrage.

Appreciating the advantage of striking while the iron was hot, Petromelinski and Blank remained behind the others, talking with the men and arranging a definite program, while Christian, Francksen, and the boys hurried forward to the little hotel where Engleman and his companions had stopped.

Hurrying forward, and throwing himself on his friend, Rob cried:

- "Hello, Hap, old fellow; it's great to see you again! I suppose it was the Indians who took you? What did they want with you, and how did Bill get you? Tell me all about it."
 - "Please tell us quickly, Happy," said Norman.
- "The medicine men of the Pueblo Indians made me a prisoner. They wished to make me a shaman or

medicine man," replied Happy. "I'm sure I'm very glad to see you all. Hello, Fred! Been playing baseball lately?"

"I should think he had," remarked Norman, laughing. "Happy, let me tell you how Fred knocked down Mashinsky with a baseball."

"Mashinsky!" cried Happy. "Sit down and tell me what you have been doing while I was away."

"Now tell me true, Happy," said Rob, as soon as they were seated, "have you had any good luck lately?"

"Good luck; why, of course I have," said Happy. "Ain't I here alive? When I have told you even a little of what we have passed through you won't ask me whether I have had good luck. It's been one continuous streak of good luck from the time we left, way up to the north where the Green and the Grand flow into the Colorado, to the time we arrived here."

"I'm only jollying you, Hap," said Rob.

"It's like salve for sore eyes to see you again, John," said Engleman, grasping Christian by the hand. "There have been many times since we parted when I never expected to meet you again, and I do not doubt but that you can say the same."

"I can, indeed, Joe," replied Christian.

"A great many things have happened since we saw each other last, John. There is so much to be done before our friends, the Gordons, are liberated, that we had better sit down and talk it over. But where are Blank and Petromelinski?"

"They remained outside talking to the men. They will be here shortly."

But we will not attempt any further to relate the conversation that took place between the different members of the two parties. They kept talking not only late into that night, but also took much of the time of the next day when they started on their journey over the Colorado Desert. Indeed, for many days afterward some additional incidents that had been temporarily forgotten were described at length.

Instead of joining Engleman and his party shortly, as Christian thought they would, it was several hours before Petromelinski and Blank came into the hotel

where they all stopped for the night.

"You must excuse us, professor," said Mr. Blank, "for not coming to talk with you before this. You may think we are hard-hearted fellows who care very little for meeting you again, but we thought it wise to make arrangements with the men who came to meet us while they were enthusiastic to organize a band to help us in releasing the Gordons and punishing Smith. But we're glad to see you all right," he said, shaking them all by the hand. "And I'm especially glad to see you, my lad," he said to Happy; "for there is much to be done and I'm counting on you for help."

"What arrangements have you made, Blank?" in-

quired Engleman.

"Tell them, Ivan," said Blank.

Petromelinski explained that a band of twenty men

had been organized to leave for the Colorado Desert. They were to assemble at a certain point, a few days' journey from the other side of the Colorado, at one of the irrigation towns.

"Is there no danger of our missing them?" inquired Christian.

"No; they have left one of their number to show us the way," replied Petromelinski.

"Have all the men left for the desert?" inquired Christian.

"Only ten of them," was the reply. "They expect to pick up the others at some of the irrigation towns further on. Blank and I thought," he continued, "that we had better make arrangements for these things now when every one seemed willing to help."

"Don't say another word about it, my dear sir," replied Engleman. "You have acted very sensibly. What you have done cannot fail to be of great help in carrying out what nearly all of us have come so far to accomplish. We from the East, and you all the way from Russia."

All were so anxious to begin work that they left Yuma that afternoon and crossed the Colorado River. Although they knew that it would be impossible to go very far, they concluded it would be wise to take this late start, especially since when Petromelinski and Blank commenced questioning Awake-in-the-Night about the smoke and fire signals, the Indian said:

"Camp to-night on side of mountain looking over

desert. Maybe Awake-in-the-Night read smoke signals for you."

"But," objected Petromelinski, "these fellows are far ahead of us. We cannot possibly see their smoke signals from here."

"Smith heap ahead," replied the Indian, "but leave Indians to tell him when you start."

"Do you believe the fellows are at it yet, Ivan?" inquired Blank, who had heard the conversation.

"Awake-in-the-Night seems to think so," was the reply.

"Joe Smith heap good leader," said the Indian.

"Always leaves some of his Indians to watch and tell him when you go and how many."

When Rob and the others told Happy about the smoke signals he was very much interested.

"Thanks to Bill there," he said, for Bill as well as Awake-in-the-Night had joined the boys, "I know much about smoke signals. Tell the boys about these signals, Bill."

"You tell them, Hap," was the reply. "I reckon ye know ez much about them ez I do."

Happy then told them how smoke signals could be used by day and smoke and flashes of fire by night. He added what Frank had failed to speak of; *i. e.*, that for day-signaling different kinds of wood were sometimes used, the lighter and drier woods making a lighter-colored smoke than dense and resinous woods. He also explained how the flashes of light were obtained by holding any opaque object over the flames,

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thus cutting it off momentarily, and then by suddenly removing it, permit the light to fall on the smoke column.

Awake-in-the-Night was evidently surprised at the extent of the lad's knowledge of such things.

"Smile-on-his-Face heap bright. Make big chief. Awake-in-the-Night tell you soon what the smoke and fire signals made by Smith's Indians mean."

They purposely selected a site for their camp on the side of a mountain looking down on the great depression below them. From here they saw on a distant mountain to the north a repetition of the smoke and fire signals. Before Awake-in-the-Night began to explain them, he remarked:

"When Indians learn that Awake-in-the-Night is leading white men and telling them what the smoke signals mean they will try to kill him, but Awake-inthe-Night friend of white men. Will do this for them."

He then began explaining in detail the signals. They were all interested in the revelation, but none so much so as the detectives, who again and again expressed their surprise at the ingenuity and completeness of the signals. This surprise, however, was somewhat decreased when Awake-in-the-Night assured them that many of these signals had been thought out by Joseph Smith.

From these signals Awake-in-the-Night informed them that Smith was on his way to a gold mine on a mesa several days to the northwest.

"Do you know where that mesa is, Awake-in-the-Night?" inquired Blank.

"Awake-in-the-Night knows that mesa;" and the Indian turned to Rob and Happy and said: "White lads too know that mesa. When Smile-on-his-Face was sick Awake-in-the-Night brought him heap good gold minerals."

"I remember," replied Happy. "I thought perhaps you got it from that place. I remember that afterward you brought me a bunch of wild dates and some more gold ore. I afterward dreamed that I saw them on the side of a mesa that Rob had dreamed about. We have always called this the 'Mesa of Rob's Dream.' I remember too, that Bill, Rob, and I saw that same mesa and the stream of water flowing down an arroya and disappearing in a cavern at the foot. Is that the mesa you are talking about?"

"It is there," replied Awake-in-the-Night, "that Joe Smith is taking his two white prisoners. Awake-inthe-Night will show you the way."

CHAPTER XXIX

THE MESA OF ROB'S DREAM REVISITED. CONCLUSION

It is unnecessary to point out the peculiarities of the country through which they passed while traveling across the desert to the mesa about which Rob had dreamed, and that he, Happy, and Colorado Bill had afterward actually seen. These the reader will find fully described in the second volume of the series, "The Land of Drought."

At one of the many settlements of the irrigated districts, where the desert had been turned into verdant fields by the life-giving waters, they met the ten men who had gone before them. These men had succeeded in enrolling ten other men, so that the volunteers now marching with them reached thirty. A general feeling of indignation prevailed when the conduct of Smith and his party had been learned, so that there had been no difficulty in obtaining volunteers. This feeling was expressed in more vigorous than choice English by one of the volunteers, as follows:

"I tell ye, gents, this here yanking white men from their friends and makin' 'em work for northin' hez got to stop, and I fer one am goin' to try to stop it right now."

Blank and Petromelinski were delighted at the increase in the number of their fighting men. It was

evident, however, that Blank was worrying about something.

"What's the matter, Blank?" inquired Petromelinski. "You ought to feel good with so many outside men ready to help us."

"I am not denying what you say, Ivan," replied Blank. "But I don't like the way Smith is kept informed of all our movements. What with his smoke and fire signals, he knows at once any new move we make. I imagine he either knows now, or will very shortly, that we are leaving here with a force of determined men. Don't you suppose he is bright enough to see that there is so angry a feeling against him and his men in the irrigation settlements, as well as in the mining districts, that might make it easy to raise an army of several hundred men to wipe him and his outlaws off the face of the earth?"

"I do not for a moment doubt, Blank," was the reply, "that Smith either knows all these things already or will soon know them. But what then?" he continued.

"What then?" replied Blank. "I'll tell you what then, Ivan. If Smith knows these things do you for a moment suppose he will be willing to have a square fight with us? I fear he will cut and run; that when we reach the mesa we will find that he is again off across the country."

"I don't know about his being willing to fight with us, but if he does cut and run where do you think he will go?"

"To the border of the river near the deeper canons of the Colorado, or its tributaries, where he has so many hiding-places. If he once gets there he will almost certainly escape."

"I have been thinking the same thing, Blank?" said Petromelinski.

"Have you planned how we might prevent him from fooling us again?" inquired Blank.

"I have," was the reply. "Listen. My plan is to take twenty of the new men; that in going toward the mesa we so shape our route that Smith could not reach the cañons of the Colorado without passing us. If we reach the mesa without meeting him we will divide and as nearly as possible surround it. What do you think of this plan?"

"It's well enough, only I imagine the mesa is too big for your small band to do much toward surrounding it."

"Right you are. It is too big for our small force, but we will ask Awake-in-the-Night to tell us the place from which Smith would most likely attempt to make his escape. But let us talk this matter over with our volunteers."

This conversation resulted in twenty of the men, accompanied by Blank and Petromelinski, marching as a separate company toward the mesa, but from a route nearer to the northeast; while Engleman and his party, under the guidance of Awake-in-the-Night, marched to the same point but from the southwest.

When they reached the neighborhood of the mesa,

Engleman stopped his party at a place where they could not be seen from the top of the mesa. Here, however, they could see the arroya, and the stream of water flowing down and disappearing in an opening below.

"Is that the arroya, Awake-in-the-Night," inquired Happy of the Indian, "where the date palms grow from which you picked the bunch of dates you brought me when I was sick in camp? Was it not from near the top of the arroya I dreamed about you got the beautiful specimens of gold ore you brought me at the same time?"

"Smile-on-his-Face has heap good memory," said Awake-in-the-Night, smiling.

"Smith and his men," said Engleman, "will of course know we are marching against him, and will probably be waiting for us. It will be dangerous to attempt to reach the mesa up the arroya if they are watching. Let us consult Awake-in-the-Night as to the best way of taking them by surprise if possible." And then turning to the Indian he inquired: "Is there any other way of reaching the top of the mesa than climbing up that arroya, Awake-in-the-Night?"

"Two other ways to top," was the reply. "Awake-in-the-Night go ahead. Wait here for him. He will try to get to the top without being seen," and with that he disappeared rapidly in the direction of the foot of the arroya where the water disappeared in the earth.

The Indian had not gone a hundred yards from them when Happy, seeing something that had not

been seen by most of the others, ran after him, closely followed by Colorado Bill and Pete. When they reached Happy and Awake-in-the-Night they saw one of Smith's Indian scouts glaring angrily at Awake-in-the-Night, and saying:

"Awake-in-the-Night heap traitor. Bring white men here and tell them about smoke signals. Indian kill Awake-in-the-Night."

With that the Indian drew his revolver, but before he could shoot Happy had sent a ball from his revolver crashing through the man's hand. The revolver dropped from his hand, and Awake-in-the-Night killed him almost immediately afterward, tearing off his scalp and hanging it in his belt.

Colorado Bill was delighted that Pete had an opportunity of seeing how quick the lad was on the shoot.

"How is that for a quick shot, Pete?" he cried.

"It war a pretty shot, Bill," replied Pete. "But why," he continued, turning to Happy, "didn't ye kill the chap yerself?"

"It seems such an awful thing to kill a man," said Happy, and then he said, although with no spirit of braggadocia, "I know I can land a bullet where I want to. I was certain I could keep him from shooting Awake-in-the-Night, so I made him drop his gun."

"Ye must not do thet again, Hap," said Colorado Bill gravely. "In this here fight we are goin' to hev we must either kill or be killed."

"All right, Bill," said Happy, "I'll remember."

When Awake-in-the-Night had scalped the Indian, he turned to Happy and said:

"Smile-on-his-Face quick with gun. Again saves life of Awake-in-the-Night. Awake-in-the-Night now very much heap his friend."

Turning to the party, Awake-in-the-Night said:

"Indian go to mesa and see what Smith is doing. Back soon. Wait for him."

"I reckon we hed better let him hev his way," said Bill, so they returned to where the others were hiding.

Happy remained for a few moments looking at Awake-in-the-Night after Bill and Pete had left him.

"Look where Awake-in-the-Night is going, Bill," he cried.

Bill and Pete did this, and saw that instead of climbing up the sides of the arroya the Indian disappeared in the opening down which the water poured.

"Whar do you think he be goin', Hap?" inquired Bill, as they hurriedly returned to the rest of the party, for they knew that the shooting would probably attract their enemy to the edge of the mesa.

"I imagine," said Happy, after explaining to Engleman and Christian what they had seen, "there is a cave at the foot of the arroya."

"That is very probable," replied the professor.

"The mesa looks as if it consisted entirely of limestone.

The small stream we see flowing down the arroya is probably only a part of the rain that falls on the mesa.

The remainder, disappearing in an opening or sinkhole at a fault or break in the limestone strata, has

probably eaten out a grotto. It is probably through this that Awake-in-the-Night knows how to reach the top of the mesa unobserved. However, there is nothing for us to do but to wait until he returns."

Nearly an hour passed before Awake-in-the-Night returned. They noticed that an additional Indian scalp was hanging at his belt by the side of the one they had seen him take.

"Another Indian try to kill Awake-in-the-Night. Not quick enough. Got his scalp," pointing to the bloody trophy.

"What news do you bring, Awake-in-the-Night?" asked Christian. "Are the fellows up there ready to put up a big fight?"

"Joe Smith and his men heap afraid," replied Awake-in-the-Night with contempt. "His scouts say to him, 'Many men after you. Run away, heap quick.' So Joe Smith take his prisoners and run."

"Is there any other place by which he can descend from the mesa?" they inquired.

"Another place on other side," replied the Indian.

"Then he will escape us," said Engleman. "I hope the other party will be able to check him."

"Joe Smith no get away," replied Awake-in-the-Night. "Indian told other party where to find only place he could come down from the mesa. Come with me, maybe we can help fight."

It was not up the arroya, but into the opening into which the waters disappeared, that the Indian led them. Here, as Engleman had expected, was a large

limestone grotto, from the high arched roof of which stalactites had joined stalagmites, and formed limestone pillars that were holding up the overhanging mass. The path led rapidly upward. After following it for about a quarter of a mile, they came out at the surface at a short distance from the edge of the mesa.

Within a stone's throw from where they emerged were the ruins of what had evidently once been a large village. With the exception of a few buildings, however, it was now a mass of ruins. So completely had the buildings crumbled that it was difficult to see what had been their original forms. A few houses, however, were still standing. Motioning to his companions to hide themselves, Awake-in-the-Night, falling on the ground, stealthily approached the buildings and disappeared. In a few moments he returned and said:

"Joseph Smith heap frightened. Has run away

with all his men."

"He will get off unless we follow quickly," said Engleman; "and he will take our friends along with him as captives."

Awake-in-the-Night smiled and said:

"Awake-in-the-Night thinks they will not get away. Follow me," and he started off on a run toward the opposite side of the mesa.

Rapidly following their guide for a few miles, they came to a place where it was possible, by following a zigzag path, to descend to the plain below. Evidently some of Smith's men had reached the plain and had

been met by the volunteers, for sounds of firing were heard.

While hesitating as to whether it would be advisable to leave the mesa before looking for their friends, they were surprised to see Smith, surrounded by a small band of his Indians and accompanied by the two Gordons, approaching. He had just learned that the volunteers with Petromelinski and Blank had defeated his men and made prisoners of all who remained alive. Seeing he was defeated, Smith turned savagely, and spurring his horse to where the Gordons were standing, struck the elder man a brutal blow on the head with the muzzle of his revolver. The man sank to the ground with a groan and lay as if dead.

"So that's the kind of dirty, cowardly scoundrel ye be," said Pete, who had hastened after Smith in a vain endeavor to reach him before he struck Gordon. "You're the coward wot strikes an old, unarmed man. Ye be the feller wot takes white men prisoners and locks them up in little houses near the tops of high walls. Now, Joseph Smith, listen to me; I'm Pete, the cowboy, wot came out with this other gent," he said, nodding to the younger Gordon. "Now," he said, covering Smith with his revolver, "hold yer hands up. I've got the drop on ye. I reckon ye kin wait a few minutes fer what I've got to say. It won't take long. Even ef I'd let ye off, ye never could pass across the desert, fer thar be too many men ready to finish ye. Now Pete wants to give ye time to think, so here goes a ball fer yer arm, and here's another fer a leg; and

now thet ye know who it be thet's after ye I'll finish ye up," saying which he sent a ball through the man's heart.

The fight was over. Smith's companions fled when they saw their leader killed. The younger Gordon," as well as Christian and Engleman, had rushed to where his father was lying on the ground.

Robert, one of the first to reach the group, cried:

"Father, I am your son Robert! Your friend, Professor Engleman, together with Mr. Christian and many others, have come West because we heard that two white men had been taken prisoners by the Mormons and Indians, and we thought they might be you and grandfather."

"My dear boy!" cried the father, embracing him.
"How you have grown! This is a happy and at the same time a very unhappy day. I fear your grandfather has been killed by the cowardly brute who has just received his just punishment."

"On the contrary," said Mr. Christian, who was kneeling on the ground feeling the man's pulse, "I am glad to say that your father is far from dead. I have some acquaintance with medicine. Unless his skull is broken, or there is some internal injury, I think he will recover. His pulse is now becoming more regular and stronger." Then turning to the others, he said: "Stand aside, please, and let his son and grandson stand where he can see them when he opens his eyes, for I think he may soon recover consciousness."

"Perhaps you do not know that my father has lost the recollection of everything except matters pertaining to his profession as a geologist."

"But my dear fellow," said Christian, "I am glad to say that it is not uncommon for people who have lost their reason by means of a severe blow on the head to regain it again after receiving a similar blow."

"God grant that it may be so now," replied the son.

"Be ready to notice him if he recognizes you, and to answer if he speaks. But don't speak to him until he speaks to you," said Christian, again feeling the man's pulse. "The heart-beats are growing stronger."

At last the wounded man opened his eyes, and looking around, evidently recognized none of them. He appeared to be afraid of something, for he called out in a pleading tone:

"Don't strike me again," putting up his hand as if to ward off a blow from his head. "You have killed my Indian, why do you wish to kill me?"

Then taking his hand from his head, he looked in a dazed manner at the blood that marked it.

"Don't say anything," whispered Christian. "He has evidently awakened in his right senses. I think he will recognize you in a moment."

Christian was correct; for as the father looked at his son there was recognition in the look.

"What are you doing here, Robert?" he inquired. "I thought you were in Philadelphia. I'm so glad to see you. I've hurt my head somehow or other. I

dreamed that it was a blow given to me by a band of Mormons and Indians, who killed my Indian guide," and then he stopped speaking, for his eye had now caught the younger Gordon, Robert.

"Who are you, my lad," he said with a smile. "You look like a Gordon. Why, Robert," he said, turning to his son, "he looks like you; but he surely can't be your boy, for when I left Philadelphia only a few months ago he was a little bit of a chap, and this lad looks at least six years older. I know it has only been a few months since I left home."

"This is your grandson, father. You have been very sick, and have been kept a prisoner by a band of Mormons and Indians for six years or over. Here is your old friend, Professor Engleman.

When Gordon saw Engleman he evidently thought that only a short time had passed since he had bidden him adieu in Philadelphia, where they had often puzzled over mineralogical problems together.

While they were still talking, Petromelinski and Blank, together with some of his party who had reached the top of the mesa, approached them.

"That's one rascal less," said Blank, looking at the dead body of Joseph Smith.

"Have you taken Mashinsky captive?" inquired Petromelinski anxiously.

"We have not seen him," was the reply. "He must have gone with the men with whom you have been fighting."

"He certainly was not with them," replied Blank,

"for we kept careful watch. He must be up here yet."

Awake-in-the-Night, who had heard the conversa-

tion, said:

"Come with Awake-in-the-Night, he can find fellow for you," and he led them through the cave and over different parts of the mesa without finding him.

"Then the rascal has again escaped," said Petromelinski. "Blank, I feel that I am justified in doubling the reward for the capture of Mashinsky."

He then notified the volunteers that he was ready to pay down two thousand dollars cash for the taking of Mashinsky alive, or one thousand dollars for taking him dead.

"Unless I can get this fellow alive and take him back to Russia I will lose the good opinion the Czar has of me."

"Don't leave me out, Ivan," said Blank. "I rather think this country has the first claim on the man, for he killed a man in Salt Lake City. However, we will catch him and settle that matter afterward."

But we have now reached the limits of a single volume. It will suffice here to say that, although every effort was made to capture Mashinsky, he escaped. That the mental recovery of Robert Harold Gordon, Sr., continued; that he remembered all of his past life, but that, strange to say, his mind continued completely blank concerning the six years he had spent in captivity with the Mormons since the injury to his head. On

afterward talking the matter over with a regular surgeon, they learned that the first blow had probably produced a pressure on the brain that the second blow had removed.

They found a wonderful deposit of gold ore on the mesa. Moreover, the two elder Gordons began comparing notes as to what each had learned about the rich quartz vein of free-milling gold ore in a cañon of the Colorado.

When the question arose as to whether the Gordons should at once return to the East, the younger man wished to take his father away from that part of the country immediately. The older man raised such objections that Christian privately advised the son that it might be dangerous to oppose him. Telegrams were therefore sent to Philadelphia, telling the good news, and arrangements were made to return to Colorado after making a study of the deposit on the mesa. This did not require much additional work since this property had already been carefully studied by the son. It had also been examined by the father, but this being a portion of his life during his captivity had been blotted out from his mind.

Francksen and Fred returned to Philadelphia with many messages for the Gordon family. What was afterward done in California, in Colorado, and elsewhere, will be found in the fourth volume of this series, entitled, "The Yellow Magnet; or, Attracted by Gold."

THE END.

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A. MESA VERDE. "The Mesa Verde, the plateau through which all these cañons have plowed their deep fissures, is a perfectly level plain overgrown with woods of piñon and cedar, so dense that it is usually no easy task to force one's way through them on horseback. It is these woods that have given the mesa its name of verde (green), as opposed to the more barren regions further south. That portion of the Mesa Verde that lies north of the Rio Mancos, the field of my researches, forms an independent plateau entirely surrounded by valleys. To the east it is bounded by Mancos Valley, to the north and west by Montezuma Valley, to the south by Mancos Cañon and the plain north of the Rio San Juan. This plateau slopes at an angle of about 1° toward the south, or in the same direction as that in which most of the cañons run. Its highest point—the summit, twenty-six hundred meters—is situated between two branches of Cliff Cañon, quite close to the steep slope that descends into Montezuma Valley. From this point we may enjoy the most magnificent view over the whole plateau with its intricate labyrinth of cañons. Far in the south we see the peaks of the Chuckluck Mountain, in the territory of the Navajo Indians, on the other side of the Rio San Juan, and east of them Shiprock, a high, isolated cone of volcanic origin. Fashioned by one of nature's

strange caprices, this mountain resembles a gigantic castle with battlements and towers set on the crest of a precipice.

"That portion of the Mesa Verde that lies southeast of the Rio Mancos slopes slowly to the south in the general direction of its cañons, or from east to west. Only on one occasion have I followed one of its cañons to its head. Beyond this point there seems to lie an extensive sandy plain with no cañons, bounded to the east by a broad valley with steep walls.

"The strata of which the Mesa Verde is composed, and through which its cañons have cut their deep channels, consist of thick beds of yellow sandstone, with extremely indistinct if any stratification, here and there intertwined with shales. The American geologist refers these strata to the Cretaceous Period. Coal is sometimes found in fairly thick seams, and unrecognizable impressions of plants occur in the shale near the coal. In the neighborhood of Grass Cañon, southeast of the Rio Mancos, are burning coal-beds, which make their presence known by gases exhaled through holes in the ground" (G. Nordenskiold, "The Cliff Dwellers of the Mesa Verde").

B. The Plateau Region. "The plateau country also abounds in volcanic rocks and extinct volcanoes. It is observable at once that the eruptions have occurred chiefly around the borders of the province, while the interior spaces disclose only occasional traces of them. The ages of these eruptions vary greatly.

Some are as old, probably, as Middle Eocene time; others are so recent that it seems almost certain that they occurred within the last thousand years, and there is no intrinsic improbability that some of the earliest Spanish visitors may have witnessed them, though they have left us no records. In the intervening periods many eruptions occurred at one place or another, and no long period of time seems to have elapsed without them.

"The distribution of the volcanic masses is of some interest, for we may perceive how they are associated with the marginal portions of the province and occur very sparingly in the interior parts of it. Near the southern base of the Uintas we do not know of any large or important masses of volcanic rocks. But our knowledge of that portion is not sufficient as yet, and future examination may disclose much more eruptive material than we are now aware of. Some scattered occurrences, however, are known there. Upon the eastern flank of the Wasatch there are many patches of old lavas, but none of very great dimensions are known. South of the Wasatch, in the district of the High Plateaus of Utah, we come upon enormous masses of volcanic rocks, covering an area of nearly nine thousand square miles, and attaining in many portions a thickness of three to four thousand feet. Most of these are of great antiquity, going back to Middle Tertiary time, and some of the oldest ones, perhaps, to Eocene time. But there are others which are far more recent, and it seems extremely probable that the latest of them have been erupted within a few hundred years. Southwest and south of the High Plateaus are many minor volcanoes, not wholly extinct; and as we descend to the Grand Cañon platform we find cinder cones, most of them well preserved, scattered about among the cliffs and terraces. As we approach the great chasm along its western half, we enter several extensive volcanic fields, in which cinder cones are thickly clustered. Many streams of basalt have flowed from them, flooding many hundred square miles of desert. Cones and lavas both show that no great length of time has passed since they were in action.

"Crossing the Grand Cañon, and still near the margin of the plateau country, we find the respectable volcanic pile of Mount Floyd, and a little farther on we reach the much grander masses of the San Francisco Mountains. Here is another large volcanic district, though much inferior to the High Plateaus, both in the area and in the thickness of the lava sheets. But it possesses what the High Plateaus do not, viz., great volcanic mountains. The principal pile, San Francisco Mountain, is a cone of almost the first order of magnitude. Its altitude above the sea, according to Wheeler, is twelve thousand five hundred and sixty-two feet, and it is the loftiest peak in the southwestern part of the country. It has long been extinct, and is greatly battered by erosion.

"Proceeding southeastward, and still keeping near the margin of the plateaus, we have hardly left the lava fields which center around these great volcanoes, when we enter upon much more expansive ones. On all the old maps of Arizona we see, roughly delineated, the so-called 'Mogollon Mountains.' They are merely the lofty erest of the plateaus looking down southwestward over the Sierra country. This crest and the tableland north and east of it are thickly sheeted over with lavas, and the area so covered is to be reckoned only by thousands of square miles. It has not been studied as yet by the gelogists, and our knowledge of it is too imperfect to justify the attempt to describe it. Still further to the southeast, as far as the southernmost promontory of the plateau country, the volcanic fields increase until they reach their maximum expanse. But they have never been studied.

"Passing out of this great lava field, and coming northward along the eastern margin of the plateaus in the Rio Grande Valley, we find many isolated patches sheeted over with lava. Indeed, we are seldom out of sight of them. Some are of considerable extent, others are hardly more than individual coulées. West of Albuquerque we find the lava fields very abundant, and in the vicinity of the San Mateo Mountains they become very extensive, and present features of the greatest interest and some novelty. . .

"The remaining portion of the plateau boundary has already been characterized as rather indefinite—perhaps from want of accurate knowledge—but it still exhibits abundant relics of volcanic action. The San

Juan Range is almost wholly buried in lavas and volcanic conglomerates. But this range has been regarded as lying just without the margin instead of within it. Still we find traces of old eruptions within the border, in the shape of dikes and necks, which are left projecting above the surface, often to considerable altitudes, showing that the lavas have once been there, but that they and some of the sedimentary strata, which they covered, have been swept away by erosion, and have vanished forever from view.

"Thus the fact is general that around the borders of the plateau country volcanic eruptions have been frequent. In making its circuit we are seldom out of sight of them, and if the journey were actually performed by a geologist he could so conduct his route that for three-fourths of the way he would be treading upon eruptive materials, and pitch his camp upon them every night. So far as we now know, none of these eruptions are older than Tertiary time; but within that limit they are of many ages and some of them are extremely recent. In the heart of the plateau country volcanic rocks are scarce. Still they occur, but under circumstances which are always interesting and suggestive. It is no uncommon thing in the heart of the plateau region to come suddenly upon a long, narrow wall of black rock, projecting hundreds of feet in air, rising out of a flat plain. The rock is a dike of basalt or andesite; but the dike itself is all the eruptive material we see-no lava stream overflowing the adjoining plain, no cinder cone, no bed of volcanic rubbish. A critical examination of the rock indicates that it has consolidated under pressure. Instead of long, narrow dikes, we often find sharp pinnacles, towers, and spires of the same black rock rising one thousand feet or more. The people who herd cattle in the vicinity call them needles. The geologist would call them 'necks.' They are the lavas which consolidated in the pipes or orifices in the strata through which they came up, while the strata themselves have been swept away, leaving these cones standing. The rock of which they are composed is more enduring against the battering of time than the sandstones and shales which once held them. It appears, then, that the scarcity of lavas in the interior spaces of the plateau country is no measure of the actual quantity of extravasation which has occurred. Lavas have been outpoured there, but have been swept away in the general wreck of the land, leaving only these stumps of volcanoes to tell the tale. How extensive these eruptions may have been we cannot judge with accuracy. Still we are not without the means of inferring with considerable confidence that they were never comparable to the vast masses now visible around the borders of the province.

"Another singular mode in which eruptive rocks occur was first shown by Mr. G. K. Gilbert, in his admirable work on the Henry Mountains. There the lavas, instead of reaching the surface and outflowing in broad streams, intruded themselves between the strata in great lens-shaped masses, half a mile or more

in diameter and several hundred feet thick. The beds above them were domed up, and are now seen curving over them. To these intrusive masses, Mr. Gilbert gave the name 'laccolites.' They present many points of interest which he has ably discussed. There are several isolated groups of mountains within the plateaus which exhibit this peculiar action, such as the Sierras Carriso, Abajo, La Sal, La Plata, and El Late" (Capt. Clarence E. Dutton, U. S. A., "United States Geological Survey, 1885").

C. BAD LANDS. "In the arid region of the western portion of the United States, there are certain tracts of country which have received the name of mauvaises terres, or bad lands. These are dreary wastes-naked hills, with rounded or conical forms, composed of sand, sandy clays, or fine fragments of shaly rocks, with steep slopes, and yielding to the pressure of the foot they are climbed only by the greatest toil, and it is a labor of no inconsiderable magnitude to penetrate or cross such a district of country. The steep hills are crowded together, and the waterways separating them are deep arroyas. Where the mud rocks, or sandy clays and shales, of which the hills are composed, are interstratified with occasional harder beds, the slopes are terraced; and when these thinly bedded though harder rocks prevail, the outlines of the topography are changed and present angular surfaces, and give rise to another type of topographic features which I have denominated Alcove Lands.

"The area north of the Uinta Mountains embraced in the survey is but small. Through the middle of it runs Green River, in a deep, narrow valley, the sides or walls of which sometimes approach so near to each other and are so precipitous as to form a cañon.

"The general surface of the country, on the north of this district, is about a thousand feet above the river, with peaks here and there rising a few hundred feet higher; but south, toward the Uinta Mountains, this general surface within a few miles of the river gradually descends, and at the foot of the mountains we find a valley on either side, with a direction transverse to that of the course of Green River and parallel to the mountain range.

"To the north the waterways are all deeply eroded; the permanent streams have flood-plains of greater or lesser extent, but the channels of the wet-weather streams; i. e., those which are dry during the greater part of the year, are narrow, and much broken by abrupt falls.

"The rocks are the sediments of a dead lake, and are quite variable in lithologic characteristics. We find thinly laminated shales, hard limestones, breaking with an angular fracture, crumbling bad-land rocks, and homogeneous, heavily bedded sandstones.

"The scenic features of the country are alike variable. On the cliffs about Green River City towers and buttes are seen as you look from below, always regarded by the passing traveler as strange freaks of nature. The limestones, interstratified with shales,

give terraced and buttressed characteristics to the escarpments of the cañons and narrow valleys.

"Immediately south of Bitter Creek, on the east side of Green River, there is a small district of country which we have called the Alcove Land. On the east it is drained by Little Bitter Creek, a dry gulch much of the year. This runs north into Bitter Creek, a permanent stream, which empties into the Green. The crest of this watershed is an irregular line, only two to four miles back from the river, but usually more than a thousand feet above it, so that the waters have a rapid descent, and every shower-born rill has excavated a deep, narrow channel, and these narrow cañons are so close to each other as to be separated by walls of rock so steep in most places that they cannot be scaled, and many of these little cañons are so broken by falls as to be impassable in either direction.

"The whole country is cut in this way into irregular, angular blocks, standing as buttresses, benches, and towers, about deep waterways and gloomy alcoves" (Powell, "Exploration of the Colorado River of the West").

D. Grand Cañon. "The varying depths of this cañon, due to the varying altitudes of the plateaus through which it runs, can only be seen from above. As we wind about in the gloomy depths below, the difference between four thousand and six thousand feet is not discerned, but the characteristics of the cañon—the scenic features—change abruptly with the change

in the altitude of the walls, as the faults are passed. In running the channel, which divides the twin plateaus, we pass around the first great southern bend. In the very depths of the cañon we have black granite, with a narrow cleft through which a great river plunges. This granite portion of the walls is carved with deep gulches and embossed with pinnacles and towers. Above are broken, ragged, non-conformable rocks, in many places sloping back at a low angle. Clambering over these we reach rocks lying in horizontal beds. Some are soft, many very hard; the softer strata are washed out, the harder remain as shelves. Everywhere there are side gulches and cañons, so that these gulches are set about ten thousand dark, gloomy alcoves. One might imagine that this was intended for the library of the gods, and it was. The shelves are not for books, but form the stony leaves of one great book. He who would read the language of the universe may dig out letters here and there, and with them spell the words and read in a slow and imperfect way, but still so as to understand a little the story of creation.

"These rust-colored shelves have above them soft shales of a lemon color, and in ascending the wall we climb them by passing up a steep slope, curiously carved by innumerable rainy-day rills. Above these we find homogeneous limestone, a thousand feet in thickness, standing in vertical cliffs. On top of this great bed we find soft sandstones, so washed away as to leave comparatively flat spaces of solid rock above—

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a bench on which we can walk on the side of the Grand Cañon, more than four thousand feet above the river.

"In many places the conditions of erosion have been such that great blocks have been severed from the main plateau and stand as outliers, their sides having all the elaborate sculpture of the walls of the cañon. Lieutenant Ives, who explored the lower Colorado, made a land trip from a point below the Grand Cañon around to the southwest, and climbed the San Francisco Plateau, and from an elevated point he could look off to the northeast and see the region of which we are now speaking. Of this country he says: 'The extent and magnitude of the system of cañons in that direction is astounding. The plateau is cut into shreds by these gigantic chasms and resembles a vast ruin. Belts of country, miles in width, have been swept away, leaving only isolated mountains standing in the gap. Fissures so profound that the eye cannot penetrate their depths, are separated by walls whose thickness one can almost span, and slender spires that seem tottering upon their base shoot up a thousand feet from vaults below.'

"In other regions the rocks, when not covered with soil or more vigorous vegetation, are at least lichened or stained, and the rocks themselves of somber hue; but in this region they are naked, and many of them brightly colored as if painted by artist gods; not stained and daubed with inharmonious hues, but beautiful as flowers and gorgeous as the clouds. Such are the

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walls of the Grand Cañon of the Colorado where it divides the twin plateaus" (Powell, "Exploration of the Colorado River of the West").

E. LAVA FLOODS. "We have no difficulty as we float along, and I am able to observe the wonderful phenomena connected with this flood of lava. The cañon was doubtless filled to a height of twelve or fifteen hundred feet, perhaps by more than one flood. This would dam the water back, and in cutting through this great lava bed a new channel has been formed, sometimes on one side, sometimes on the other. The cooled lava being of firmer texture than the rocks of which the walls are composed remains in some places; in others a narrow channel has been cut, leaving a line of basalt on either side. It is possible that the lava cooled faster on the sides against the walls, and that the center ran out; but of this we can only conjecture. There are other places where almost the whole of the lava is gone, patches of it only being seen where it has caught on the walls. As we float down we can see that it ran out into side cañons. In some places this basalt has a fine columnar structure, often in concentric prisms, and masses of these concentric columns have coalesced. In some places when the flow occurred the cañon was probably at about the same depth as it is now, for we can see where the basalt has rolled out on the sands, and, what seems curious to me, the sands are not melted or metamorphosed to any appreciable extent. In places the bed of the river is of sandstone

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or limestone, in other places of lava, showing that it has all been cut out again where the sandstones and limestones appear, but there is a little yet left where the bed is of lava.

"What a conflict of water and fire there must have been here! Just imagine a river of molten rock running down into a river of melted snow. What a seething and boiling of the waters! What clouds of steam rolled into the heavens!" (Powell, "Explorations of the Colorado River of the West.")

MINERALS MENTIONED IN VOLUME III

For the sake of those who are making collections of minerals, the following brief descriptions of some of the mineral species referred to but not described in this volume are here given.

In most cases, the chemical composition of the minerals is placed immediately after the name. This, however, is only given for the sake of those who wish this information. The exact chemical compositions of the minerals are not necessary to understand their general properties.

AGATE (SiO₂). A variety of chalcedony, consisting of numerous layers arranged in extremely thin, parallel bands that are either straight, curved, or zigzag.

Agate, like other forms of quartz, is sufficiently hard to scratch glass, and will take a high polish. It occurs in pebbles of irregular outlines. These pebbles, when cut and polished, show that the mass consists of a great number of very thin layers, generally deposited in irregular layers.

The peculiar banding of agate is due to the fact that the separate layers of which the mineral consists have been deposited on one another, very slowly and at different times.

Agates were formed in the interior of what are 384

called amygdules, or hollow spaces in the interior of igneous rocks, or rocks that were once in a liquid state by reason of great heat. While cooling, these rocks had cavities or hollow spaces, of sizes varying from that of a small pea to a large goose egg or over, blown in them by the volatilization of drops of water or other liquids. These spaces have been filled with thin layers of quartz, by heated waters passing over the igneous rocks and gradually penetrating the hollow spaces and filling them. These waters carry with them very small quantities of quartz, or silica, that they have dissolved out of the igneous rocks, and on their evaporation have left it as a very thin but uniform lining, covering the inside of the cavities. As the cavities are successively filled with water containing dissolved quartz, the layers are deposited over one another, and since these fillings take place at different times, the layers are apt to be of different colors, owing to the small quantities of coloring materials present.

The successive layers of the bands of agate are very thin. Many thousands have been counted in the thickness of a single inch.

Sometimes agate pebbles are found that are partially hollow, only a portion of the interior space having been filled with quartz from the infiltrating waters. Such masses are called *geodes*, and are generally found lined with crystals of quartz or amethyst.

It is interesting to study the appearance presented by any good specimen of agate that has been cut

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across the pebble and polished. In such cases the center of the deposited mass has collected around it in more or less regular layers. Various names are given to agates from the appearance of these successive layers, a very common form being known as eye agate, from the eyelike appearance of the center of the mass.

AMETHYST (SiO₂). A variety of quartz, of a purple or bluish color, that is used for ornamental purposes.

The color of the amethyst is believed to be due to the presence of small quantities of manganese. When amethyst is heated it changes to a yellow color.

Borax (Na₂B₄O₇+10H₂O). A chemical substance that is known as hydrated borate of sodium occurring in the mineral form

It is not necessary for the younger students to puzzle over the chemical formula shown as the composition of borax. It is enough to know that borax consists of two atoms of sodium (Na_2) , combined chemically with boric acid, or four atoms of boron (B_4) and seven atoms of oxygen (O_7) , and that to these have been added, by a weaker chemical combination, ten parts of water, or $10H_2O$.

Borax is an important mineral that is common in the waters of some inland lakes. On portions of the borders of such lakes that have lost their waters by evaporation, large crystals of borax are often found. Borax is used in the manufacture of boric acid. It is also used for the preservation of meat and fish.

CARNELIAN (SiO₂). A variety of chalcedony consisting of red and brownish-red material.

CERARGYRITE (AgCl). An ore of silver, consisting of one atom of silver combined with one atom of chlorine, or silver chloride.

Cerargyrite is sometimes known as horn silver, because it possesses a horny appearance.

It is interesting to note that this mineral, silver chloride, has the same composition as a substance used in photography, for making silver prints. In other words, it is slightly blackened on exposure to light.

CHALCEDONY (SiO₂). A variety of quartz that appears to be amorphous, or to possess no regular crystalline form.

Chalcedony possesses a waxy luster and even fracture, and a hardness like that of ordinary quartz. This mineral seems to have been deposited from a solution of quartz in water in cavities in igneous rocks. It is generally banded in structure.

Chalcedony occurs in a great variety of colors, varying from white, yellowish-brown, and dark brown. It occurs in kidney-shaped masses, or in stalactitic or icicle-like forms.

There are a great variety of chalcedonys, such as agate, carnelian, onyx, sardonyx, etc.

FLINT (SiO₂). A variety of nearly opaque quartz, of a dull color, varying from gray to smoky-brown and brownish-black, that is generally found coated on the outside with layers of lime or chalk.

Flint is generally found associated with chalk formations. It is of organic origin, having been derived from the spicula, or sharp, thornlike masses of quartz found in sponges. It has been found in microscopic form in plants known as *diatoms*, etc.

Flint possesses a conchoidal or shell-like fracture. It has a marked cleavage, and being, like other varieties of quartz, very hard, it was employed in prehistoric times by the Indians and others for the making of arrow-heads, spear-heads, etc.

GARNETS. A name given to a variety of complex minerals, consisting of silica combined with various substances.

Garnets occur generally in the crystalline rocks. They are of various shapes and colors, deep red being the commonest.

GYPSUM (CaSO₄+2H₂O). An important compound, consisting of one atom of calcium (Ca), combined with one atom of sulphur and four atoms of oxygen, to which a certain quantity of water (2H₂O), called water of crystallization, has been added.

Gypsum forms what the chemists know as *sulphate* of lime. It occurs in the form of clear, transparent crystals, so soft that they can readily be scratched by the thumb nail.

Sulphate of lime is present in the waters of the ocean and of inland lakes, so that when these waters are evaporated crystals of gypsum are separated.

When heated in a furnace gypsum parts with its water of crystallization (2H₂O), and is changed into an opaque white substance known as plaster of Paris, the material that is employed for covering walls, making casts, etc.

Finely crystalline varieties of gypsum form what are known as *selenite*. Varieties that occur in a fibrous form are called *satin spar*, while a massive variety, generally of a pure white, though sometimes colored, forms what is known as *alabaster*.

Gypsum is readily cleaved, breaking into thin, transparent plates, resembling mica but much softer. Sometimes where the crystals have been slightly separated, so that a film of air can penetrate the mass, rainbow colors, known as Newton's rings, are seen. These colors are due to the interference of light.

HALITE (NaCl). An important mineral, also known as rock salt, or common table salt, invariably found in the waters of the ocean, or of lakes or seas that only lose their waters by evaporation.

Halite consists of one atom of sodium (Na), combined with one atom of chlorine (Cl), and therefore forms what the chemists call sodium chloride.

It is easy to recognize halite, since, when touched to the tongue, it is found to possess the well-known salty taste of common table salt. Halite has a vitreous or glasslike luster, and can readily be cut or scratched by the knife. It is clear and transparent when pure, but sometimes occurs in different shades of red and yellow, while at times deep blue patches are seen in otherwise colorless, transparent crystals.

JASPER (SiO₂). An impure variety of quartz, that occurs generally of a red color due to oxide of iron, although sometimes of a yellowish or dark-green color.

Jasper sometimes occurs with the colors arranged in bands. This variety is known as *ribbon jasper*. The bands are usually, in fine specimens obtained from the Ural Mountains, of reddish-brown and sage-green colors, arranged in parallel straight bands.

MIRABILITE (Na₂SO₄+10H₂O). A crystalline salt, consisting of sulphate of soda with water of crystallization, that is better known under the name of *Glauoer's* salt.

Moss Agate (SiO₂). A variety of agate in which mosslike deposits of differently colored minerals, such as *chlorite*, manganese oxide, or other minerals, occur, so distributed through the mass as to give it the appearance of moss imbedded in the material. In some forms of moss agate the moss-shaped collection of crystals, instead of being distributed through a mass of agate, are distributed through crystals of clear, colorless quartz.

NATROLITE. A complex salt, consisting of silicic acid combined with sodium and aluminium.

Natrolite is a brittle, colorless, crystalline substance, possessing an uneven fracture and a colorless streak; that is, it does not leave a colored mark when drawn over a surface.

It sometimes occurs in needle-shaped crystals in a variety known as the fibrous zeolite.

OBSIDIAN. A variety of volcanic glass that is formed when molten rock or lava of a certain kind cools rapidly.

Obsidian occurs in colors varying from gray to black, but sometimes grayish-black, purplish, red, and brown, and sometimes, though rarely, almost color-less.

A variety of obsidian, of a highly porous character from the presence of numerous minute air bubbles, is known as *pumice stone*.

ONYX (SiO₂). A variety of chalcedony, consisting of alternate layers of strongly contrasting colors, usually white and black or white and brown.

The alternate colors are like those in agate, except that the banding is straight and the layers generally lie in even planes.

The fact that the layers in onyx are flat permits this stone to be used in cameos, in which the object is cut in the light-colored material—say in the white—of one layer, the next layer being left in the background.

OPAL (SiO₂). A variety of silica that, unlike all others, contains a small quantity of water.

Opal is an amorphous body; that is, it does not occur in crystalline form.

A peculiarity of the opal is due to a property known as opalescence, which causes the mineral to present the peculiar appearance of water containing a small quantity of milk. In other words, the mineral exhibits a display of colors.

Opals occur in various colors. They are sometimes transparent, but generally only translucent. The variety known as *precious opal* is highly prized from the magnificent play of colors possessed by some species. One variety, known as the *fire opal*, throws off a bright red flash of light, not unlike that of a fire. Another variety, that gives off various colors of light, is known as the *harlequin opal*. It is interesting to note that some varieties of so-called *petrified wood* consist of species of common opal.

QUARTZ (SiO₂). A mineral that is widely distributed throughout nature.

Quartz consists of one atom of silicon (Si), combined with two atoms of oxygen (O₂), forming a chemical substance known as silica.

Quartz occurs in a great variety of forms, some of them occurring as crystals that possess the transparency, luster, and brilliancy of the diamond, although not its hardness.

It is quartz that forms the greatest portion of the

sands of the seashore. It also occurs in sandstone, and forms an important portion of many other rocks, such as granite and gneiss.

SARDONYX (SiO₂). A variety of chalcedony consisting, like the onyx, of layers of white and brown, or white and brown with occasional layers of sard or carnelian.

SYLVITE (KCl). A comparatively rare mineral, that is sometimes found in rock salt or halite, which it closely resembles in color, taste, and hardness.

When pure, sylvite can easily be distinguished from halite; for, if a small fragment is placed in the color-less flame of a Bunsen burner it will give a violet color to the flame, while a piece of halite, or rock salt, similarly treated gives the flame a deep yellow color.

Sylvite is now employed in some of the electrochemical laboratories near Niagara Falls, and elsewhere, in the manufacture of an important chemical salt known as *potassium chlorate*.

Sylvite consists of one atom of potassium (K), combined with one atom of chlorine (Cl). It is therefore what the chemists call potassium chloride.

THENARDITE (Na₂SO₄). A mineral substance consisting of sulphate of soda, or two atoms of sodium (Na₂), combined with one atom of sulphur (S) and four atoms of oxygen (O₄).

NOTE

For the sake of those who wish to understand to some extent the chemical compositions as represented by the chemical formula placed after the names of the minerals, the following elementary facts are given:

In order to avoid the necessity for writing out the full names of the chemical elements, abbreviations, known as *chemical symbols*, are employed. For example, instead of writing silicon, the first two letters, Si, are employed. In this symbol the first letter, S, would be employed were it not for the fact that the letter S is employed as the symbol for sulphur. Consequently, the first and second letters of the word silicon are used, or Si. In the case of silver, since both S and Si have been employed, Ag, two letters of the Latin name for silver, *argentum*, are used.

So too, since P is employed for the element phosphorus, it cannot be employed for potassium, hence K, the first letter of the Latin name, *kalium*, is used.

But the chemical symbols mean more than the mere names of the chemical elements. They stand for an atom of each of these elements; that is, for what is provisionally regarded as the smallest quantity of the elements that can exist alone. Moreover, when the chemical atoms have entered into chemical combination with one another, this fact is indicated by writing the sym-

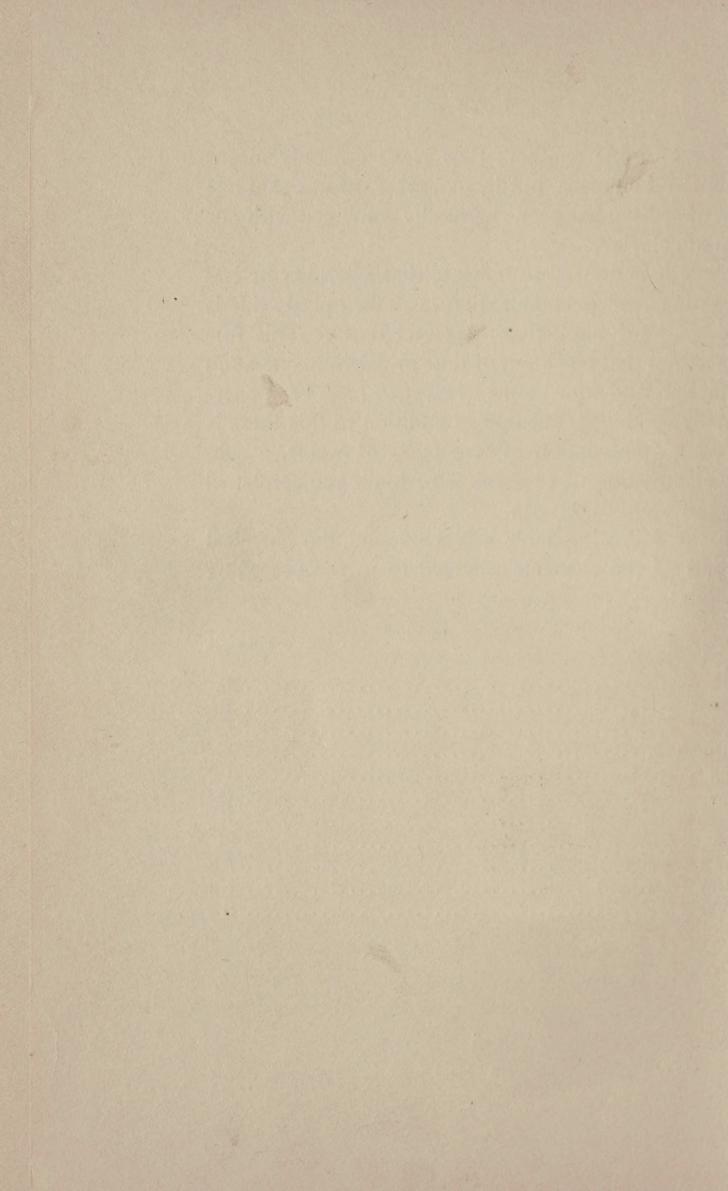
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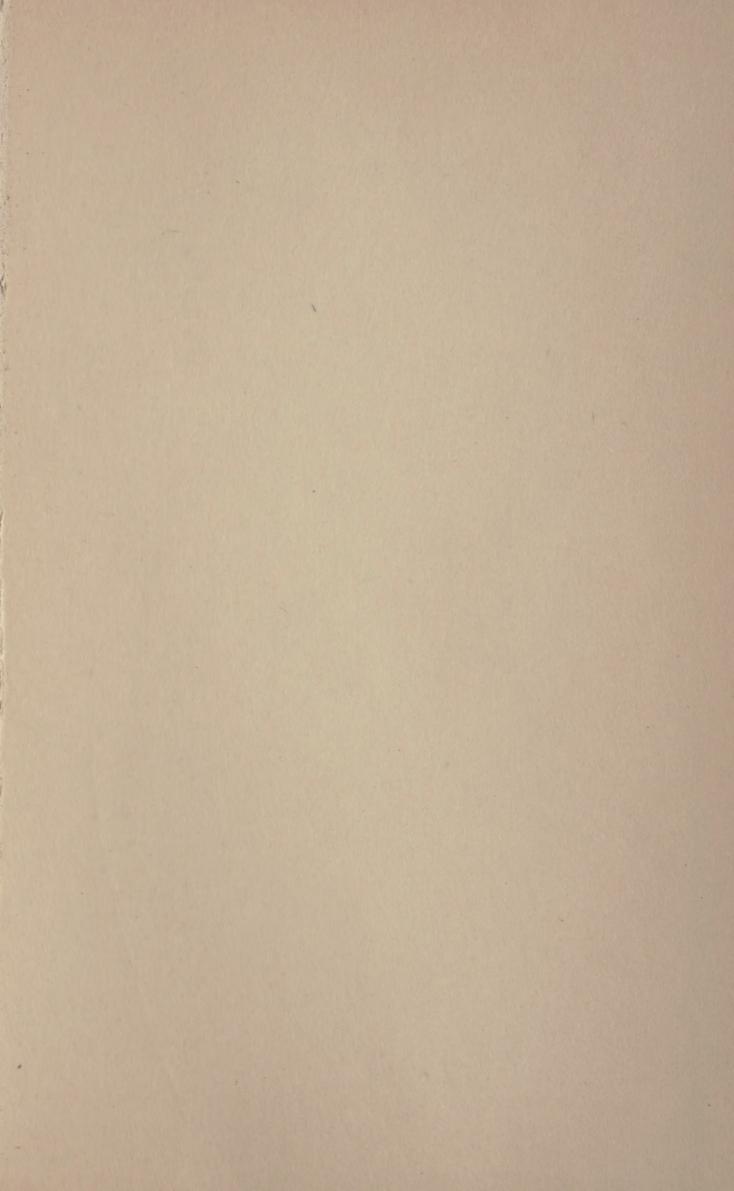
bols next to one another; thus NaCl not only means sodium and chlorine, but it, moreover, means that one atom of sodium has been chemically combined with one atom of chlorine.

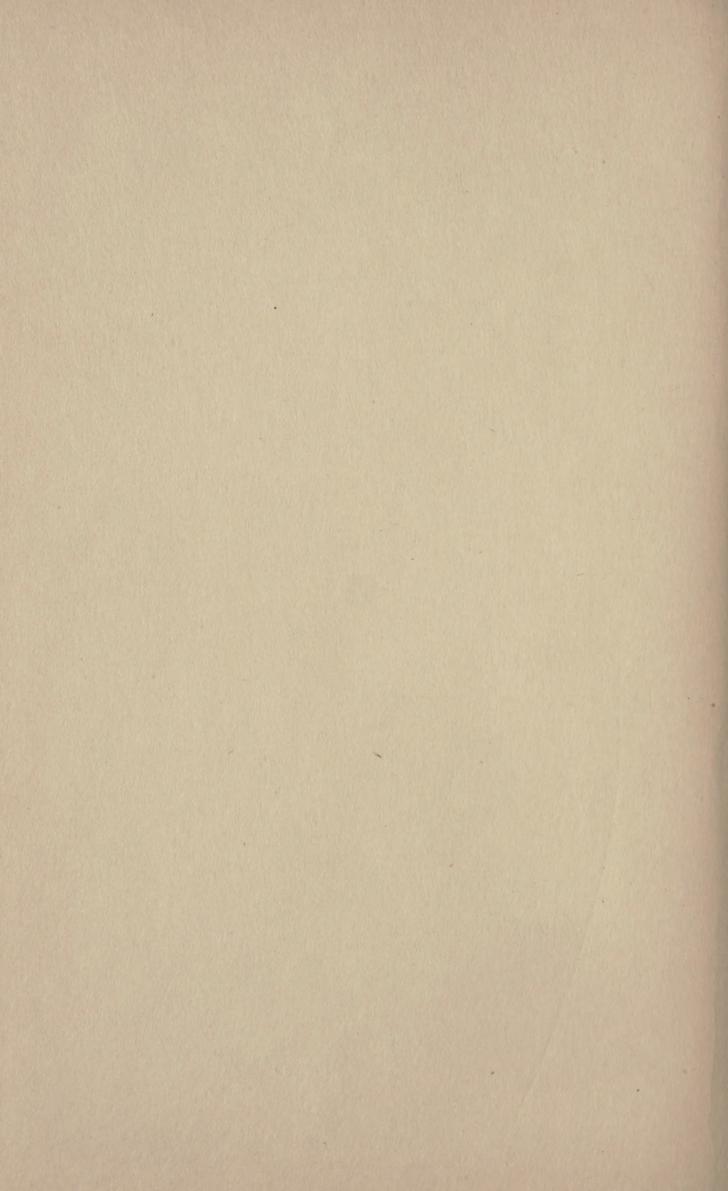
When it is desired to indicate that a weaker or less energetic chemical combination has taken place, this is done by the + sign, thus: CaSO₄+2H₂O. This formula shows that one atom of lime or calcium, one atom of sulphur, and four atoms of oxygen have been energetically combined, but that in addition to this there is a weaker combination of two parts of water, a substance consisting of two atoms of hydrogen combined with one atom of oxygen.

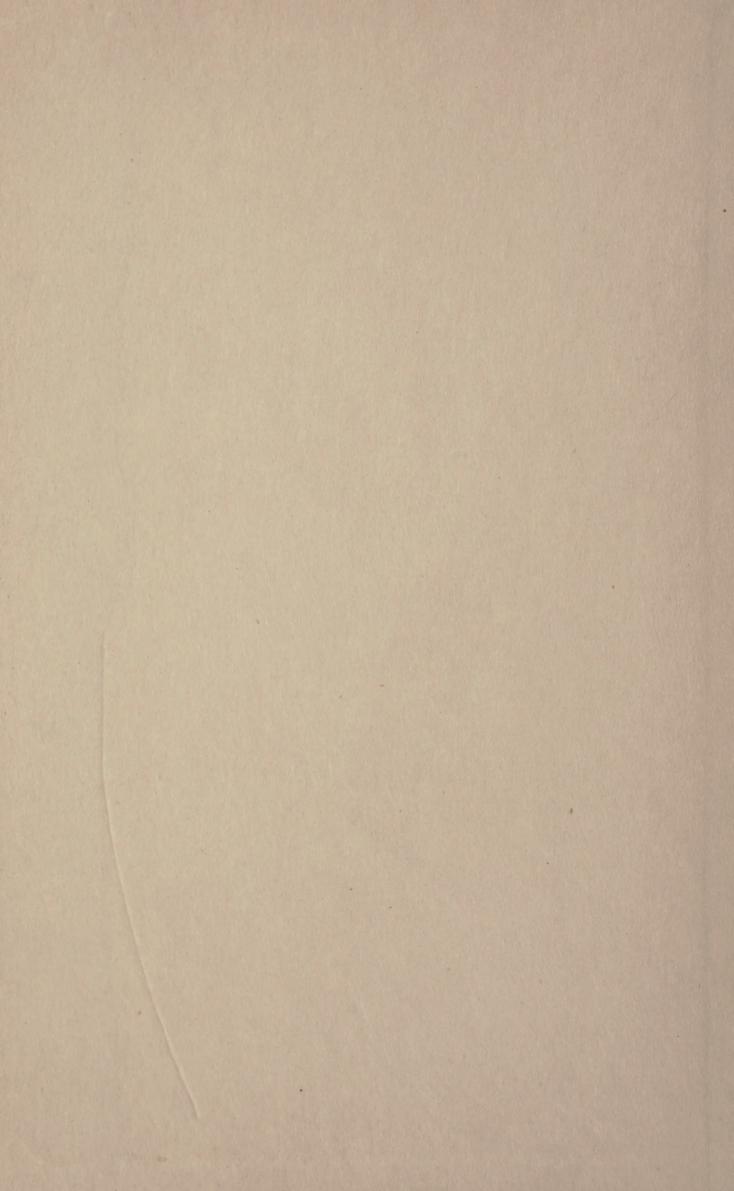
In the following table will be found the chemical symbols of the elements referred to in the preceding minerals:

NAMES OF CHEMICAL ELEMENTS	CHEM	IICAL BOLS
Boron		В
Bromine		Br
Chlorine		C1
Hydrogen		H
Iodine		I
Oxygen		0
Potassium (Kalium)		
Silicon		Si
Silver (Argentum)		
Sodium (Natrium)		Na
Sulphur		S









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